
INDEX

SOVIET PHYSICS JOURNAL

Volume 18, Numbers 1-12, 1975



SOVIET PHYSICS JOURNAL
Volume 18, Numbers 1-12, 1975

(A translation of Izvestiya VUZ. Fizika)

A

Abbasova, R. - 1321
Abdullin, É. N. - 260
Abrosimov, B. G. - 114
Afanas'ev, V. P. - 1000
Agalakova, T. P. - 1447
Agapova, S. I. - 900
Agartanova, E. N. - 401, 729
Agishev, V. M. - 1460
Aizikov, B. Ya. - 288
Akerman, S. G. - 144
Akerman, S. T. - 143
Aleksandrov, L. N. - 465
Aleksandrov, N. A. - 143
Alekseenko, A. I. - 145
Alekseev, B. F. - 438, 1390
Alekseev, V. I. - 360
Alekseeva, S. I. - 1
Aleskovskii, V. B. - 1764
Aliverdiev, A. A. - 1209
Ali-Zade, M. Z. - 216
Allsalu, M.-L. Yu. - 543
Anan'ev, L. M. - 1465
Anatychuk, L. I. - 593
Andreev, A. A. - 439
Andreev, S. D. - 291
Andreev, S. S. - 1473
Andrianov, A. S. - 1240
Andronov, M. P. - 1059
Anistratov, A. T. - 441
Annenkov, Yu. M. - 410, 436, 541, 592, 593, 1469, 1486
Anokhina, I. N. - 1641
Antoniv, I. P. - 1498
Aref'ev, K. P. - 886, 1777
Arinshtein, É. A. - 108, 293, 913, 1327
Arsen'ev, P. A. - 858
Arushanov, G. G. - 781
Ar'yanov, A. P. - 142, 288, 437
Asanov, G. S. - 70, 711, 966
Atakova, M. M. - 1169
Avericheva, V. E. - 1055
Averk'eva, G. K. - 575
Avksent'ev, Yu. I. - 1629
Avraamov, Yu. S. - 417

Azarov, V. V. - 1348
Azimov, S. A. - 781

B

Babetskii, V. I. - 1378
Babich, B. N. - 879, 1738
Babinets, O. L. - 271
Badluev, A. I. - 332, 337
Bagduev, G. B. - 147
Bagrov, V. G. - 34, 140, 347, 351, 431, 461, 590, 749, 905, 909, 1058, 1123, 1180, 1212, 1218, 1304, 1498
Baksht, R. B. - 1021
Balychev, I. N. - 437
Banakh, G. F. - 578
Banakh, V. A. - 170
Barabash, R. I. - 1244
Baranov, A. I. - 698
Baranov, G. I. - 438
Barybin, A. V. - 543
Basariya, A. G. - 105
Bashkirov, Sh. Sh. - 1, 1715
Bashmakova, M. I. - 275, 289, 1359
Basov, Yu. G. - 27, 166
Basova, M. P. - 287
Baum, B. A. - 521, 1202
Bazakutsa, V. A. - 472
Bazarov, I. P. - 626, 1382
Bazhenov, V. V. - 902
Bazhin, A. I. - 360, 863
Begzhanov, R. B. - 1070
Bekhtev, B. V. - 255
Belan, D. P. - 1240
Beleicheva, T. G. - 1336
Belomestnykh, V. N. - 146, 435, 1211
Belomytsev, S. Ya. - 1622
Belous, M. V. - 1244
Belov, V. V. - 1535, 1540
Berezin, A. A. - 1189
Berezin, V. I. - 103, 355
Berezin, V. V. - 1093
Bereznyakov, A. I. - 750
Beshtoev, Kh. M. - 1054, 1767
Bessonov, N. A. - 289
Betsa, V. V. - 1781
Bhoshin, E. B. - 875
Bibolov, I. N. - 417
Bich, V. M. - 1671
Binnatov, K. G. - 397
Birkle, G. V. B. - 1361
Birzhanov, K. Zh. - 205, 212
Biyachuev, A. S. - 1780
Blinkin, A. M. - 556
Blinkova, V. G. - 1056
Bobrovnikov, M. S. - 1467
Boby'l, V. G. - 287
Boev, S. G. - 436, 732
Bogatyreva, L. A. - 1495
Bogdan, G. I. - 1502
Bogdanov, V. I. - 738
Bogdanovich, M. P. - 1346, 1671
Bogomolov, N. S. - 1078
Boidenko, V. S. - 320
Boiko, L. M. - 287
Boiko, V. G. - 1210
Boiko, V. I. - 623
Bokova, N. A. - 1114
Bokun, G. S. - 84
Bolkhovityanov, Yu. B. - 1183
Bondar', M. P. - 677
Bondar', V. G. - 1193
Bondareva, A. G. - 422
Borovinskii, L. A. - 971
Bordovitsyn, V. A. - 1209
Borisov, A. N. - 1620
Borisov, A. V. - 493, 1213, 1315, 1400
Borisov, B. D. - 1360
Borovko, E. V. - 92, 903, 1055, 1639
Borshchevskii, A. S. - 572
Bosin, M. E. - 549
Botaki, A. A. - 751, 1211
Bovenko, V. N. - 116
Boyarshtinov, L. M. - 288, 290
Bozhkov, V. G. - 1137, 1142
Bratchikov, A. D. - 408
Brovkov, V. A. - 327, 610
Bublik, V. T. - 738
Bugaev, S. F. - 1622

Bugaev, S. P. - 173, 260
 Bukhbinder, I. L. - 1180, 1212
 Bulanyi, M. F. - 439
 Bulyshev, A. E. - 1655
 Burachevskii, Yu. A. - 707
 Buravikhin, V. A. - 5
 Burdovitsin, V. A. - 1698
 Burinskii, A. Ya. - 721
 Bushnev, L. S. - 404, 879, 1738
 Butkevich, N. P. - 408
 Butkov, V. V. - 882
 Bychkov, Yu. I. - 1026, 1044
 Bystritskii, V. M. - 1564
 Byzov, N. N. - 898, 899, 1304

C

Chaldyshev, V. A. - 1361, 1438, 1640, 1642
 Chalyi, A. V. - 1771
 Cheglov, E. I. - 1588
 Chenakin, S. P. - 1244
 Chepur, D. V. - 132, 533
 Cherkashin, A. E. - 786
 Cherkasov, V. S. - 37, 144, 290
 Chernenko, I. M. - 1752
 Chernenko, V. P. - 376
 Chernov, S. M. - 1385
 Chernov, V. K. - 1620
 Chernshov, V. N. - 1640
 Chernyavskii, B. G. - 748
 Chernyi, L. M. - 17
 Chernykh, I. V. - 5, 1248
 Chernyshov, V. N. - 1438, 1642
 Chetverikov, V. M. - 304
 Chizhov, G. A. - 513, 765
 Chubis, V. P. - 143
 Churkichev, M. V. - 858

D

Damaskinskii, E. V. - 1545
 Danilova, V. I. - 37, 144, 145, 749, 897, 900, 1397
 Davydovskii, V. Ya. - 1732
 Degtyarev, M. V. - 1361
 Deikova, G. M. - 1779, 1780
 De Leon, Victor Antonio - 1615
 Demidenko, M. V. - 1051, 1361
 Demidova, N. N. - 1746
 Dem'yanov, B. V. - 1596
 Denisov, F. P. - 746
 Denisova, N. A. - 1157
 Diamant, V. M. - 888, 894
 Didovich, Yu. N. - 1325
 Dikudar, L. D. - 610
 Dimitrashuk, V. T. - 593

Dluzhnevskii, G. I. - 735
 Dmitrenko, Z. F. - 1057
 Dobrotvorskii, V. V. - 265
 Dobrozhangskii, Yu. A. - 1640
 Dob'yanskii, S. A. - 132
 Dolgov, A. S. - 1394
 Dolya, P. A. - 275
 Dolyuk, A. V. - 412, 1066
 Domyshev, V. A. - 1374
 Dovgopol, S. P. - 1722
 Dovgoshei, N. I. - 724
 Dozmorov, I. M. - 224
 Drokin, A. I. - 503, 1118
 Drokin, N. A. - 1620
 Dubnik, Z. E. - 438
 Dudarev, A. T. - 691
 Dudarev, E. F. - 285, 327, 610, 653
 Dudnik, E. F. - 1754
 Dutchak, Ya. I. - 101, 295
 Dvinyaninov, B. L. - 1059
 Dvorina, L. A. - 1276
 Dylevskii, G. B. - 420
 Dzhurakulov, A. - 1321

E

Efimov, V. I. - 682
 Efimovskii, V. V. - 530
 Efremov, V. N. - 1581
 Egorushkin, V. E. - 141, 920, 1287, 1292, 1641
 Ékelekyan, V. L. - 1568, 1573
 Ekhanin, S. G. - 1774
 Ekle, G. G. - 590
 Elaev, V. F. - 13, 126
 Elagin, V. P. - 145
 Él'dib, A. M. - 312
 Eliseev, A. A. - 252
 Emel'yanova, T. S. - 146, 292
 Ermolaev, A. M. - 118
 Erokhin, N. F. - 746
 Esipenko, V. F. - 1596
 Étin, F. I. - 1777
 Evdokimov, O. B. - 901, 1207, 1339
 Evseev, V. D. - 536, 1729
 Evstigneev, V. V. - 623, 1637
 Evtushenko, G. S. - 1281
 Ezhovskii, Yu. K. - 1078

F

Fadin, V. I. - 141
 Fadin, V. P. - 920, 1287, 1292, 1641
 Falenchuk, A. D. - 1210, 1362

Fainitskii, B. B. - 727, 1496
 Fal'ko, I. I. - 118
 Fedak, V. V. - 533, 586
 Fedirko, V. A. - 960
 Fedorov, B. V. - 1331, 1333
 Fedorov, M. V. - 773, 836
 Fedorova, S. P. - 476
 Fedosenko, P. B. - 1359
 Fedosov, N. I. - 898, 899, 1123
 Fedyanova, N. I. - 1641
 Fedyanovich, A. A. - 275
 Fesenko, V. M. - 285, 1760
 Filonov, A. G. - 1618
 Finkel', V. M. - 41
 Fisanov, V. V. - 1467
 Flesher, G. I. - 140, 1058, 1327
 Frangul'yan, T. S. - 410, 541, 592, 593, 1469
 Frantsevich, I. N. - 1329
 Frenchko, V. S. - 101, 295
 Freze, N. I. - 273, 1668
 Funke, Kh. - 516
 Fuks, D. L. - 975, 1357
 Furman, M. P. - 718
 Fursa, A. D. - 88

G

Gadomskii, O. N. - 1626
 Gaev, S. A. - 1463
 Gaevskii, O. K. - 1483
 Gaida, R. P. - 1658
 Gakhramanov, N. F. - 291
 Galanov, Yu. I. - 1469
 Galanskii, V. L. - 1698
 Galushchak, M. A. - 900
 Gaman, V. I. - 332, 337
 Gangnus, V. S. - 1093
 Ganin, V. V. - 355
 Ganzha, R. I. - 1066
 Ganzha, R. N. - 412
 Gapchin, B. M. - 1523
 Garmash, V. Ya. - 417
 Gasanly, N. M. - 291
 Gavrilenko, N. V. - 1210
 Gavrilo, F. F. - 1059, 1361
 Gavrilo, S. P. - 351
 Gel'd, P. V. - 521, 1202, 1447, 1604, 1628
 Gene, V. V. - 1754
 Genkin, S. A. - 1618
 Gering, G. I. - 437
 Germogenov, V. P. - 1265
 Gertovich, T. S. - 1029
 Gerzanich, E. I. - 132
 Gevorkyan, É. V. - 1382
 Gindin, I. A. - 1635

Ginsar, V. E. - 401, 729
 Ginzburg, A. E. - 1443
 Gitman, D. M. - 34, 140, 347,
 351, 455, 461, 749, 750, 899,
 905, 909, 1058, 1097, 1123,
 1180, 1212, 1218, 1304, 1498
 Glazov, G. N. - 1353, 1511
 Glezer, A. M. - 220
 Glukhov, Yu. B. - 1325
 Glushkov, E. A. - 1058
 Gnidash, N. I. - 472
 Gol'denberg, S. U. - 1746
 Golosov, N. S. - 1718
 Golovach, I. I. - 589
 Golovei, M. I. - 132
 Golovikhina, V. P. - 594
 Gorbach, S. S. - 1662
 Gorban', A. N. - 382
 Gorbatenko, L. S. - 747, 750
 Gorchakov, L. V. - 129, 900
 Gorelik, Ya. B. - 293, 913
 Gorlach, V. V. - 1056, 1640
 Gornostaev, V. F. - 777
 Gorshenkov, V. N. - 1643
 Goryunov, V. A. - 1438
 Gos'kov, P. I. - 146, 292
 Grachev, Yu. N. - 1520
 Grammakov, A. G. - 1578
 Grashin, A. F. - 898
 Grebneva, V. L. - 746
 Grechishkin, V. S. - 561, 1172
 Gridnev, A. G. - 1281
 Grineva, S. I. - 1029
 Grinshtein, Ya. D. - 108, 293
 Grinyaeva, I. A. - 143, 747, 748
 Gromov, V. E. - 605
 Gubareva, N. V. - 677
 Gulevich, G. M. - 1760
 Gurchumeliya, A. D. - 984
 Gurin, N. T. - 586
 Gurkov, V. I. - 558
 Gurzan, M. I. - 132
 Gusev, V. G. - 1319
 Gushchin, B. S. - 1202
 Guts, A. K. - 293
 Guzeev, M. N. - 1055
 Gzogyan, A. M. - 438

I

Ignat'ev, Yu. G. - 753, 845
 Ignatov, A. V. - 192
 Ignatov, V. P. - 436, 1177
 Igonin, S. I. - 394
 Il'ichev, O. V. - 1177
 Il'in, A. G. - 1066

Il'in, V. P. - 1622
 Isakov, N. S. - 1059
 Isakov, S. N. - 1363
 Iskhakov, R. A. - 1715
 Iskra, V. D. - 660
 Ismailov, I. M. - 291
 Istomin, V. V. - 1722
 Itin, V. I. - 408, 1299
 Ivanchin, A. G. - 832
 Ivanenko, D. D. - 721
 Ivankina, M. S. - 146
 Ivanov, E. V. - 636
 Ivanov, I. G. - 645
 Ivanov, M. A. - 1208
 Ivanov, V. N. - 1244
 Ivanov, V. P. - 41
 Ivanov, V. T. - 740
 Ivanova, E. V. - 873
 Ivanova, R. P. - 161
 Ivasenko, N. F. - 1114
 Ivlev, L. S. - 291, 583
 Ivolska, V. V. - 1024
 Ivon, A. I. - 1752
 Ivonin, I. V. - 1074, 1166, 1258,
 1270
 Izmailov, S. V. - 481
 Izvozhchikov, V. A. - 367

K

Kabanov, M. V. - 238
 Kalinin, V. M. - 438
 Kalinkin, I. P. - 1078
 Kalinovich, D. F. - 1329
 Kal'noi, S. E. - 425
 Kal'yanov, B. I. - 746
 Kamenskii, Yu. V. - 1696
 Kamentsev, V. P. - 777
 Kamin, V. A. - 1473
 Kaplin, V. V. - 1128
 Kapustin, A. P. - 750
 Karavaev, G. F. - 903, 1549
 Kargopol'tseva, N. P. - 1678,
 1683
 Karimov, R. G. - 825, 1323,
 1414
 Karimov, S. - 1499
 Karlovskaya, I. V. - 1498
 Karpenko, I. K. - 589, 1470
 Karshibaev, A. - 216
 Kashkarov, P. K. - 1554
 Kassirov, G. M. - 1021
 Kasymov, M. K. - 1209
 Katerenyuk, D. M. - 1210
 Katsnel'son, A. A. - 397, 939
 Kaul', B. V. - 1153
 Kazakov, A. F. - 925

Kazakov, O. G. - 437
 Kazantsev, A. P. - 618
 Kelemen, V. I. - 808
 Kel'man, V. A. - 1089
 Kerimov, B. K. - 979
 Kessel', M. G. - 1054
 Khachatryan, Yu. M. - 246
 Khachin, V. N. - 594
 Khalikov, G. A. - 591
 Khalilov, V. R. - 513, 765
 Kharitonov, A. V. - 288, 415,
 1059, 1495
 Kharitonov, Yu. N. - 1766
 Kharlamov, V. F. - 640, 1208
 Kharlova, R. P. - 1443
 Khasan, Kh. V. - 858
 Khaustova, V. I. - 1397
 Khiminets, V. V. - 586
 Khmelevtsov, S. S. - 1047
 Kholomai, B. V. - 1613
 Khoruzhii, V. D. - 899
 Khotchenkov, A. G. - 1196
 Khrantsova, S. A. - 1029
 Khrapov, A. V. - 1549
 Khripkov, Yu. F. - 556
 Khristenko, I. N. - 263
 Khudomyasov, A. I. - 898, 899,
 1410, 1611
 Kikneshi, A. A. - 533, 1034
 Kim, Gvan De - 1578
 Kim, P. D. - 1495
 Kim, V. A. - 902
 Kirchanov, V. S. - 1172
 Kireev, P. S. - 342
 Kirichok, P. P. - 417
 Kiriya, V. S. - 499
 Kir'yakov, B. S. - 593
 Kiselev, V. P. - 1588
 Kitaev, G. A. - 1361
 Klimenko, V. A. - 751, 930
 Klimenko, Yu. I. - 592, 898,
 899, 1200, 1304, 1410, 1479,
 1611
 Klyava, Ya. G. - 1769
 Klykov, I. I. - 1642
 Kocherbaev, T. K. - 1783, 1784
 Kochetkova, A. V. - 401
 Kodomskaya, N. A. - 1361
 Kodzhespirov, F. F. - 439
 Kol'chuzhkin, A. M. - 66, 875,
 1198, 1433
 Kolesnikov, L. V. - 786
 Kolesnikov, N. N. - 1385
 Kolobashkin, V. M. - 1177
 Kolobov, Yu. R. - 879, 1738
 Kolubaeva, L. A. - 904
 Komarov, S. A. - 1467

Komarov, V. D. - 1362
 Kondaurov, N. M. - 342
 Koneva, N. A. - 1596
 Kononov, B. A. - 901, 1339
 Kononova, V. V. - 436
 Konoplich, R. V. - 1709
 Kon'shina, L. F. - 290
 Konstantinovich, A. V. - 551, 1061
 Konusov, V. F. - 123, 176
 Koppel', A. A. - 1232
 Korablev, G. A. - 589, 1054
 Korepanov, V. I. - 698, 1212, 1639
 Korkina, M. P. - 17
 Kornetov, V. N. - 141
 Kornev, Yu. V. - 649
 Korr'ich, V. G. - 382, 591
 Kornienko, L. A. - 327, 610
 Kornitskii, A. G. - 342
 Korolev, Yu. D. - 1618
 Korostev, S. V. - 408
 Korotaev, A. D. - 273, 1668
 Korotkov, A. I. - 179
 Korovkin, M. V. - 955
 Korsunskii, A. M. - 422, 901
 Koshcheev, S. V. - 786
 Koshelev, F. P. - 1489
 Koshelev, V. I. - 173
 Kosogov, O. V. - 1578
 Kosolobov, S. N. - 947
 Kostenko, D. S. - 1784
 Kosyachenko, L. A. - 1049
 Kotlyarovskaya, O. Ya. - 1359
 Kovalenko, N. F. - 1502
 Kovalenko, V. F. - 1058
 Kovalenok, G. V. - 748, 1162, 1204, 1208, 1496, 1499
 Kovalev, I. F. - 1696
 Kovalevskaya, T. A. - 143, 748
 Kovalyuk, Z. D. - 420
 Kovatsenko, V. N. - 902
 Kovenskii, I. I. - 1329
 Kozhin, D. I. - 291
 Kozhukhova, G. N. - 146, 292
 Kozlov, E. V. - 1419, 1443, 1596
 Kozlov, S. N. - 242, 1554
 Kozlovskii, I. V. - 88
 Kozlovskii, V. Kh. - 803
 Krasil'nikova, L. M. - 1074, 1166, 1258, 1270
 Krasnov, I. V. - 1624
 Krasnozhenov, E. P. - 1782
 Kravchenko, N. S. - 935, 1102
 Kravets, A. N. - 142, 1209
 Krekov, G. M. - 583, 1047
 Krekova, M. M. - 1047

Krentsis, R. P. - 1628
 Krikheli, M. G. - 808
 Krive, I. V. - 995
 Krylov, A. F. - 1475
 Kucherenko, É. I. - 686
 Kuchin, V. A. - 140, 909, 1058, 1218
 Kuchumov, B. M. - 1698
 Kudryavtseva, N. V. - 309
 Kukanov, A. B. - 429, 551, 853, 1061, 1429, 1503
 Kul'chitskaya, A. K. - 472
 Kulikov, A. F. - 385
 Kulish, P. P. - 1545
 Kulish, V. V. - 1410, 1479, 1611
 Kulybin, V. M. - 1425
 Kunaev, A. M. - 572
 Kuplauskene, A. V. - 1344
 Kupliauskis, Z. I. - 1344
 Kuplyauskene, A. V. - 1224
 Kuplyauskis, Z. I. - 31, 1224
 Kurbatov, B. A. - 672
 Kurbatov, Yu. A. - 1044
 Kurdgelaidze, D. F. - 1150
 Kurdgelaidze, E. F. - 516
 Kurchin, V. N. - 536
 Kurov, V. S. - 1323, 1414
 Kusainov, S. G. - 572
 Kushnir, A. S. - 1191
 Kustovskii, L. G. - 417
 Kutukova, E. S. - 1333
 Kutasevich, A. K. - 590
 Kuvandykov, O. K. - 1633
 Kuz'menko, G. I. - 1779
 Kuz'menkov, L. S. - 714
 Kuznetskii, R. S. - 902
 Kuznetsov, V. B. - 590
 Kuznetsov, V. P. - 1160
 Kuznetsov, S. I. - 1628
 Kuznetsova, E. M. - 324
 Kuznetsova, R. V. - 594

L

Labunov, V. A. - 618
 Labutin, V. M. - 777
 Labzin, V. A. - 902
 Labzovskii, L. N. - 984
 Lapkovskii, A. K. - 80
 Laptai, D. A. - 412, 1066, 1118, 1783
 Laptinskii, V. M. - 80
 Larin, V. L. - 279, 1351
 Larina, R. R. - 594
 Lavrov, P. M. - 461, 750, 899, 905, 909
 Lavrova, S. I. - 401, 729

Lavrent'eva, L. G. - 1258, 1270
 Lebedev, Yu. I. - 769
 Lebedev, Yu. N. - 1419
 Lebedeva, N. I. - 1774
 Lenisov, L. P. - 595
 Lesnaya, M. I. - 1276
 Letyuk, L. M. - 417
 Levandovskii, V. D. - 1755
 Levin, E. S. - 481, 1604
 Levina, V. B. - 748
 Levitskii, A. D. - 273, 1668
 Levkov, A. N. - 1084
 Liberman, A. B. - 1, 1715
 Likhushin, Yu. B. - 1496
 Lipnik, A. A. - 1476
 Lisin, V. A. - 884
 Lisitsyn, V. M. - 695, 698, 1056, 1212, 1639, 1640
 Lisitsyna, L. A. - 1056
 Litvinov, E. A. - 1622
 Litvintsev, V. V. - 5, 1248, 1325
 L'nyanoi, V. N. - 1692
 Loboda, L. I. - 591
 Loginova, E. N. - 1114
 Lomakin, G. G. - 1084
 Lomsadze, Yu. M. - 808
 Lopatin, V. V. - 376
 Losev, V. F. - 1026
 Loskutov, A. V. - 686
 Lozanskii, É. D. - 287, 1593
 Luksha, O. V. - 724
 Luste, O. Ya. - 593
 Luzgin, N. I. - 1374
 Lyutyi, A. I. - 46

M

Madumarov, Sh. S. - 417
 Magalinskii, V. B. - 813, 1295, 1762
 Magdiev, A. M. - 147
 Maier, G. V. - 1641
 Makhnii, V. P. - 1049
 Makienko, A. V. - 748
 Maksimenko, T. I. - 1058
 Makushkin, Yu. S. - 299, 1011, 1106
 Malik, A. I. - 420
 Malinenko, E. M. - 863
 Malofienko, G. M. - 436
 Malov, M. M. - 183, 187, 667, 672
 Mal'tsev, V. I. - 1024
 Malyshkov, Yu. P. - 142, 288
 Mamykin, A. I. - 1390
 Manenkova, L. K. - 1715
 Maramzina, M. A. - 1578

Markov, I. I. - 468
 Maronchuk, I. E. - 1058
 Maronchuk, Yu. E. - 539
 Martynov, G. V. - 1348
 Masarnovskii, L. V. - 1074
 Masharov, S. I. - 525, 751, 930, 1725
 Mashek, A. Ch. - 440
 Matronitskii, Ya. S. - 1501
 Matrosov, I. I. - 252
 Matyukhin, A. A. - 1315
 Mavlonov, Sh. - 1499
 Mayer, G. V. - 580
 Medved', A. I. - 1497
 Medvedev, A. F. - 1132
 Melikhov, Yu. F. - 594
 Mel'chenko, V. S. - 27, 166
 Mel'nichuk, I. V. - 1029
 Mel'nikova, L. D. - 46
 Men', A. N. - 589, 1193, 1346, 1671
 Men', B. A. - 568, 601
 Mendoza, Domingo Vera - 1615
 Merzlyakova, M. N. - 820
 Meshcheryakov, N. A. - 1363
 Meshcheryakov, V. A. - 528
 Meshkov, A. G. - 286, 431, 1123, 1304
 Mesyats, G. A. - 1618, 1622
 Mikhailichenko, Yu. P. - 279, 436, 1182
 Mikhailin, V. V. - 543
 Mikhailov, A. M. - 123, 176
 Mikhailov, V. I. - 716
 Mikhailova, T. G. - 120
 Mikhal'chuk, A. A. - 1210
 Mikhal'chuk, A. Ya. - 1497
 Mikhel'son, A. V. - 1628
 Mikho, V. V. - 701, 1057
 Milant'ev, V. P. - 1365
 Milyutin, G. V. - 1057
 Mirkin, L. I. - 594, 1018
 Mirol'yubov, R. K. - 140
 Mironov, A. L. - 1722
 Mironov, V. L. - 170
 Mirskaya, K. V. - 290
 Mishina, L. A. - 897
 Mityagin, V. I. - 898
 Mogel', Kh. - I - 1771
 Mokrousov, V. V. - 141
 Molotilov, B. V. - 220
 Mordiyuk, V. S. - 465
 Morev, S. N. - 1342, 1497, 1774
 Morozov, A. M. - 201, 649, 1530

Morozov, D. F. - 1500
 Morozov, Yu. P. - 591, 904
 Morozova, N. K. - 667, 672
 Moskalenko, N. I. - 267
 Moskalev, V. A. - 1160
 Moskaleva, A. S. - 1465
 Motoshkin, V. V. - 283
 Movchan, S. P. - 750
 Mudrov, A. E. - 528
 Mudruk, V. K. - 1361
 Murav'ev, I. I. - 286, 825, 1281, 1323, 1414
 Murtazin, I. A. - 1310
 Musaev, K. M. - 1783
 Myalova, E. M. - 1635
 Myasnikova, T. P. - 747
 Myshkin, V. G. - 1360

N

Nagibarov, V. R. - 1626
 Naiborodenko, Yu. S. - 408
 Naiden, E. P. - 1024, 1452
 Naimi, E. K. - 371
 Nakhimovskaya, L. A. - 746, 897
 Namitokov, K. K. - 1781
 Napora, I. D. - 591
 Narkevich, I. I. - 84, 891
 Narozhnyi, A. N. - 605
 Naryshkina, L. G. - 1054
 Naslednikov, Yu. M. - 899
 Natarov, A. P. - 1497
 Naumov, N. D. - 429, 853
 Nazhalov, A. I. - 141, 920, 1287, 1292, 1641
 Nedranets, Yu. I. - 103
 Nekrasov, A. G. - 1210
 Nekrasov, A. V. - 440
 Nemchenko, A. M. - 427, 1501
 Nesmelov, N. S. - 1497, 1774
 Nesterenko, A. P. - 410
 Nichugovskii, G. I. - 394
 Nikishin, V. I. - 1059
 Nikitenko, V. A. - 183, 187
 Nikitin, M. M. - 1132
 Nikitin, Yu. P. - 1709
 Nikitina, N. V. - 285, 653
 Nikolaev, O. S. - 440
 Nikolaev, G. B. - 142
 Nikolaev, G. V. - 1206, 1207, 1642
 Nisichenko, V. P. - 489
 Nizkii, S. E. - 1405
 Nosachev, B. G. - 1191
 Nosovets, A. V. - 592
 Novakovich, A. A. - 312

Nurlygayanov, F. B. - 630
 Nuvar'eva, V. V. - 1174
 Nyavro, V. F. - 1287, 1292, 1641

O

Obosov, V. I. - 21, 1514, 1609
 Okulov, B. V. - 1206, 1564
 Ol'khovskii, I. I. - 1568, 1573
 Olovyanishikova, A. M. - 285, 653
 Omel'chenko, S. A. - 1191
 Orlov, A. M. - 769
 Orlovskaya, L. V. - 1678, 1683
 Orlovskii, V. M. - 1044
 Otpushchennikov, N. F. - 593
 Ozhigov, L. S. - 556

P

Pakhnev, A. V. - 1662
 Palatnik, L. S. - 530
 Panin, V. E. - 327, 593, 610, 975, 1357
 Pankov, Yu. D. - 1209, 1473
 Panov, V. P. - 1361
 Papirov, I. I. - 263, 549
 Parygin, V. N. - 1005, 1037
 Pasechnik, L. P. - 1365
 Pashaev, B. P. - 1780
 Pashuk, I. P. - 1757
 Pas'ko, P. G. - 183
 Paskal', Yu. I. - 1360, 1497, 1500
 Pavars, I. A. - 1604
 Pavlenko, Yu. G. - 1369
 Pavlov, N. I. - 287
 Pavlov, P. V. - 546
 Pavlov, V. F. - 503
 Pelageikin, V. N. - 5
 Perkal'skis, B. Sh. - 279, 436
 Perminov, V. N. - 1783
 Perov, Yu. S. - 316, 363
 Pershin, A. A. - 238, 1782
 Pestov, Yu. V. - 1473
 Petrov, A. S. - 718
 Petrov, M. A. - 718
 Petrov, O. S. - 1210
 Petrov, V. V. - 1557
 Petrova, I. Yu. - 543
 Petrova, N. M. - 390
 Pevzner, Sh. M. - 1780
 Pichakhchi, G. I. - 575
 Pichugin, V. F. - 410, 541, 575, 592, 1486
 Pidzyrailo, N. S. - 1757

Pimenov, V. A. - 727, 1196
 Pinchuk, V. P. - 382
 Pirmatov, I. I. - 781
 Pkhalagov, Yu. A. - 238, 291, 1782
 Plyasheshnikov, A. V. - 66
 Podgrushko, N. F. - 1276
 Podkauro, A. M. - 41
 Podlasov, S. A. - 1483
 Podus, G. N. - 1058
 Poizner, B. N. - 1319
 Pokrovskaya, L. A. - 1346
 Pokrovskii, V. K. - 1346
 Polyakov, V. V. - 1750
 Polygalov, Yu. I. - 156
 Ponomarev, O. A. - 740
 Popik, Yu. V. - 1781
 Poplavnoi, A. S. - 156, 792
 Popov, L. E. - 143, 747, 748 1596
 Popov, L. N. - 1005, 1037
 Popov, V. A. - 141, 1287, 1292, 1641
 Popov, V. I. - 1643
 Popov, V. L. - 747
 Popova, S. I. - 291
 Popova, T. N. - 252, 1056
 Porokhovnichenko, L. P. - 1258, 1270
 Pozdeeva, E. V. - 1055
 Pozhidaeva, Z. M. - 1362
 Poznanin, P. L. - 95, 566, 760
 Predvoditelev, A. A. - 394
 Preobrazhenskii, N. G. - 916, 1655
 Presnov, V. A. - 232, 1640
 Pribytkov, G. A. - 1299
 Prilezhaeva, N. A. - 258
 Priyutov, M. V. - 1696
 Prochukhan, V. D. - 575
 Prodan, V. D. - 1501, 1502
 Prokhorenko, V. Ya. - 1523
 Prokop'ev, E. P. - 886
 Prorvin, A. I. - 1500
 Proskurovskii, D. I. - 404, 1687
 Prud'ko, N. I. - 287
 Pryanchikov, E. N. - 1781
 Psarev, V. I. - 385, 1455
 Puchkarev, V. F. - 1687
 Pugachev, S. I. - 287
 Pustynnikov, V. G. - 136

R

Rabotkin, V. G. - 1618
 Radchenko, V. E. - 597
 Radutskii, G. M. - 877

Raigorodskii, L. D. - 1237
 Rakhimov, R. F. - 583
 Ramazanov, P. E. - 718, 1169 1174
 Rarenko, I. M. - 1029
 Rashidkhanov, K. M. - 367
 Ratnikov, É. V. - 271
 Razorenov, V. M. - 144
 Red'kin, G. A. - 528
 Revenko, V. I. - 1026
 Rigina, I. V. - 291
 Rodionov, A. A. - 898, 1362
 Rodionov, V. N. - 765
 Rodionov, Yu. L. - 397
 Romanchuk, I. T. - 1363
 Romanova, L. M. - 1164, 1500
 Romanovskii, V. A. - 134
 Rotshtein, V. P. - 404
 Rott, L. A. - 84
 Rozneritsa, Ya. A. - 1501, 1502
 Rozumnyi, O. T. - 1635
 Ruban, R. N. - 1502
 Rubanov, V. N. - 1779, 1780
 Rubinovich, I. M. - 590
 Rud', B. M. - 1755
 Rud', Yu. V. - 572, 575
 Rudyak, V. M. - 704, 777, 1766
 Rummyantsev, V. S. - 704
 Rusin, L. I. - 146, 292
 Rvachev, A. L. - 743
 Ryabinina, E. Z. - 645
 Rybakov, Yu. P. - 489
 Rybakova, T. V. - 575
 Rybalko, N. M. - 525, 1725
 Ryzhov, V. V. - 875, 1198, 1775

S

Sabirov, R. Kh. - 1560
 Sachenko, V. P. - 312
 Sadykov, S. A. - 1633
 Safronova, U. I. - 984
 Sakash, G. S. - 291
 Salanskii, N. M. - 412, 1066, 1620
 Salimov, S. Kh. - 1070
 Sal'nikov, V. N. - 732, 955, 1186
 Salomatov, V. N. - 1748
 Salov, A. V. - 472
 Samokhvalov, I. V. - 1016, 1153
 Samorukov, B. E. - 1039
 Samsonov, G. V. - 1276, 1755
 Sanadze, V. V. - 105
 Sapogin, V. G. - 1732
 Saprykin, V. D. - 145
 Sardanashvili, G. A. - 1695
 Sarrak, V. I. - 327

Sarry, M. F. - 433
 Savchin, L. S. - 590, 1363
 Savin, V. V. - 249
 Savel'ev, V. A. - 1764
 Savitskaya, L. K. - 951
 Savitskii, A. P. - 951
 Savitskii, V. G. - 829
 Savushkina, V. V. - 897
 Sechkarev, A. V. - 438, 1500
 Sekerzhitskii, V. S. - 1208, 1499
 Sekisov, F. G. - 1021
 Seleznev, V. V. - 1780
 Selivanova, N. F. - 1276
 Semak, D. G. - 533, 586, 1034
 Semenov, V. P. - 112, 150
 Semenova, O. N. - 126
 Semenova, O. P. - 13
 Sementsov, D. I. - 201, 649, 1530
 Semín, B. N. - 143, 144
 Serbulov, Yu. A. - 1177
 Serdyutskii, V. A. - 989
 Serdyuk, V. V. - 192
 Sergeev, V. P. - 605
 Severdenko, V. P. - 618 1494, 1495
 Sevryuk, V. P. - 140, 195, 435,
 Shafir, M. M. - 142, 1160
 Shaikevich, I. A. - 9, 1032, 1463
 Shakhmatov, V. M. - 455, 1097, 1304
 Shamanaev, V. S. - 1016
 Shamsutdinov, I. A. - 740
 Shaparev, N. Ya. - 1624
 Shapiro, I. B. - 1492
 Shapovalov, A. V. - 431, 1123
 Shapovalov, V. N. - 286, 431, 461, 590, 657, 797, 905, 1123, 1304, 1641, 1650
 Shaskol'skaya, M. P. - 1662
 Shchedrin, I. S. - 255
 Shchedrina, N. V. - 1506
 Shcherbakov, V. E. - 1118
 Shcherbina, L. V. - 1502
 Shcherbina, V. P. - 37, 144, 145, 290, 900
 Shchevelev, G. E. - 1207
 Shelkovnikov, Yu. K. - 146, 292
 Sheinker, M. E. - 1628
 Sherstyakov, A. P. - 539
 Shirikova, S. L. - 916
 Shirokov, A. A. - 1137, 1142
 Shishkin, E. M. - 561, 1172
 Shkalet, V. I. - 530
 Shkatov, V. T. - 143, 144
 Shkurko, A. I. - 1248
 Shkuryaev, P. G. - 286
 Shkuryaeva, V. B. - 1057
 Sholkina, M. V. - 743

Sholokhova, L. V. - 408
 Shoshin, É. B. - 1198
 Shpak, V. G. - 563
 Shreder, É. G. - 1360, 1497, 1500
 Shtambur, I. V. - 1191
 Sktan'ko, V. F. - 695
 Shubin, A. F. - 870
 Shul'ga, V. G. - 360
 Shul'man, G. A. - 1208, 1499
 Shunyaev, K. Yu. - 1671
 Shurygin, P. M. - 769
 Shustova, V. N. - 1564
 Shutov, Yu. N. - 546
 Shvarev, K. M. - 521, 1202
 Shvartsman, Sh. M. - 34, 347, 351, 455, 479, 1097, 1498
 Sidorenko, E. N. - 1362
 Sidiyakin, V. G. - 1483
 Sigaev, G. I. - 436
 Simanchuk, V. I. - 1123
 Sinenko, S. B. - 1066
 Sinyakov, E. V. - 1754
 Sinyavskii, V. I. - 1, 1715
 Sirota, N. N. - 817, 840, 1606
 Siukaev, N. V. - 902
 Sivolap, V. E. - 422
 Sivov, Yu. A. - 899
 Skachkov, S. I. - 156
 Skobelev, V. V. - 62, 1146, 1481
 Skubnevskii, É. V. - 691
 Slivka, V. Yu. - 724
 Slonetskii, A. F. - 1210
 Slonova, E. S. - 902
 Smagin, A. G. - 942
 Smirnov, A. I. - 110, 590, 709, 901, 1496, 1631
 Smirnov, G. V. - 1021
 Smirnov, I. S. - 738
 Smirnov, N. M. - 595, 746
 Smolin, M. D. - 1329
 Smol'skaya, L. P. - 198
 Smylov, E. F. - 1018
 Sobotkovskii, B. E. - 438
 Sokolov, A. A. - 51, 493, 508, 1400
 Sokolov, S. S. - 138
 Sokolov, V. A. - 288, 415, 899
 Sokolova, E. A. - 146, 292
 Sokolova, N. L. - 46
 Sokolovskii, R. I. - 56, 947
 Soldatenkov, I. S. - 1336
 Soloshenko, I. I. - 1635
 Solovarov, N. K. - 1626
 Solov'ev, L. A. - 594
 Somov, A. I. - 556
 Sotiriadi, G. N. - 279

Sotkin, V. A. - 279
 Sperantov, V. V. - 1498
 Stakhin, N. A. - 265
 Starodubtsev, V. A. - 732, 1331, 1333, 1405
 Starostenkov, M. D. - 1419
 Stel'mashenko, M. A. - 401, 729
 Sterkhov, V. A. - 900, 1496
 Stepanov, V. G. - 698
 Stetsenko, P. I. - 1629
 Strakhov, L. P. - 367
 Strelkov, G. M. - 1520
 Styrov, V. S. - 288
 Styrov, V. V. - 406, 415, 640, 1059, 1208, 1495, 1501
 Subkhankulov, I. - 1633
 Sudakova, N. P. - 1628
 Sukhovarov, V. F. - 161
 Suleiman, Él'kheder - 1503
 Sultanov, S. - 1499
 Sultanov, Sh. A. - 1780
 Sus, A. N. - 1093
 Suslikov, L. M. - 724
 Suvorov, A. E. - 1655
 Suyarov, N. Yu. - 1321
 Sveshnikov, S. V. - 939
 Svinarenko, A. P. - 556
 Sviridov, I. F. - 232
 Sviridova, K. A. - 897
 Svishchenko, V. V. - 1641
 Sysoeva, L. N. - 1074

T

Tabachenko, A. N. - 989
 Tagaev, R. T. - 1633
 Tailashev, A. S. - 1596
 Tais'eva, V. A. - 1362
 Talanov, V. M. - 1193
 Tarasenko, V. F. - 249, 1026
 Tarasov, V. I. - 1385
 Tartakovskii, V. K. - 88
 Tashtanova, M. - 575
 Terletskii, A. Ya. - 862
 Ternov, I. M. - 493
 Terpugova, A. F. - 578, 580
 Teshabaev, K. T. - 1070
 Teslenko, T. S. - 677
 Tetel'baum, D. I. - 546
 Tikhonova, L. V. - 309
 Timan, B. L. - 1760
 Timofeev, M. N. - 173
 Timofeev, V. B. - 1026
 Timoshenko, V. I. - 1467
 Tishchenko, Yu. A. - 37, 145, 290, 749
 Titov, G. A. - 1353, 1511

Tkharev, E. E. - 618
 Tokar', S. S. - 615, 1255
 Tokarivskii, M. V. - 1757
 Tolmacheva, N. D. - 435
 Tomashuk, Yu. K. - 615
 Tonkonogov, M. P. - 205, 212
 Tonkoshkur, A. S. - 1752
 Topol'skii, V. G. - 746
 Torchinskaya, T. V. - 1502
 Torgunakov, N. G. - 1500
 Tortika, A. S. - 556
 Tosheva, M. V. - 1554
 Tsal', N. A. - 1498
 Tsaune, A. Ya. - 1110
 Tsendrovskii, V. A. - 1782
 Tsindergozen, A. N. - 971
 Tsvetkov, V. P. - 979
 Tsvirko, Yu. A. - 1244
 Tsyganov, A. D. - 716
 Tsvyk, R. Sh. - 170
 Tsybul'ya, V. V. - 1497
 Turik, A. V. - 1362
 Turyanitsa, I. D. - 586, 1034, 1781
 Turyanitsa, I. I. - 1034
 Tunyak, V. N. - 74, 77
 Tyalin, Yu. I. - 41
 Tyul'kov, G. I. - 882
 Tyumentsev, A. N. - 273, 1668
 Tyurin, Yu. I. - 1059, 1495, 1501
 Tyuterev, V. G. - 792

U

Uchaikin, V. V. - 1433
 Uchaikina, R. F. - 729
 Udodov, V. N. - 1718
 Ukhlinov, G. A. - 856
 Ukolov, A. S. - 1732
 Ulenikov, O. N. - 299, 1011, 1106
 Ul'yanov, V. L. - 751
 Ul'yanov, V. V. - 138, 277, 399, 425, 1492
 Ushakov, A. I. - 1248
 Ushakov, V. Ya. - 376
 Usherenko, A. A. - 718
 Usov, Yu. P. - 1564

V

Vafin, R. A. - 1494
 Vaisburd, D. I. - 143, 144, 437, 840, 1160, 1606
 Vakhromev, V. G. - 732
 Valdimirov, Yu. S. - 1581
 Varshavskii, P. T. - 568, 601

Vasil'ev, V. M. - 136
 Vekilov, Yu. Kh. - 738
 Veklenko, B. A. - 1000
 Veksler, V. A. - 205, 212
 Veksler, V. I. - 1637
 Veselkova, M. M. - 667, 672
 Vigdorovich, V. N. - 856
 Vikhrenko, V. S. - 84
 Vilisov, A. A. - 888, 894, 1265
 Vilisova, M. D. - 1166
 Viner, I. Ya. - 865
 Vinitskii, I. M. - 1755
 Vityuk, N. V. - 701
 Vlasov, V. I. - 902
 Verevkin, Yu. N. - 1039
 Voitik, I. G. - 27, 166
 Volkov, L. A. - 1058
 Volkov, N. V. - 1602
 Volkov, V. E. - 286, 727, 1496
 Volkov, V. M. - 9, 1032, 1463
 Voloshchenko, A. M. - 1369
 Volovik, V. D. - 1041
 Volynets, G. A. - 748, 1162, 1204,
 1208, 1496, 1499
 Volzhenskii, D. S. - 829
 Vo Nong Viet - 645
 Vorobeichikov, É. S. - 1005,
 1037
 Vorob'ev, A. A. - 410, 536, 732,
 832, 955, 1128, 1186, 1729
 Vorob'ev, F. A. - 56
 Vorob'ev, G. A. - 283, 1774
 Vorob'ev, S. A. - 886, 1128, 1777
 Voronkov, M. G. - 1696
 Voronkov, S. A. - 561
 Voronkov, V. P. - 888, 894
 Vorontsov, V. I. - 1057
 Vyatkin, A. P. - 1137, 1142, 1265
 Vychkov, Yu. I. - 1618

Y

Yagnova, L. I. - 406
 Yagushkin, N. I. - 901, 1339
 Yakashvili, D. V. - 856
 Yakimavichyus, I. A. - 31
 Yakovenko, N. G. - 549
 Yakovlev, L. G. - 558
 Yakubenya, M. P. - 1074
 Yakubovich, N. I. - 748
 Yakunin, A. Ya. - 1191
 Yakusheva, N. A. - 539
 Yalovets, A. P. - 1207
 Yamaleev, K. M. - 1460
 Yancharina, A. M. - 286
 Yankelevich, Yu. B. - 1698
 Yarosh, E. M. - 592
 Yastremskii, A. G. - 1775
 Yul'met'ev, R. M. - 554, 1252
 Yurike, Ya. Ya. - 870
 Yurkov, V. A. - 749
 Yushina, M. Ya. - 1227

Z

Zabirov, F. G. - 1494
 Zadorozhnyi, V. N. - 34, 461,
 905
 Zagryazhskii, V. L. - 1447
 Zaidman, S. A. - 618
 Zaitseva, M. P. - 1057
 Zakharov, I. A. - 1764
 Zakharov, Yu. A. - 786
 Zamiryakin, L. K. - 438
 Zamozhskii, V. D. - 1698
 Zashchinskii, L. A. - 536, 832
 Zausaeva, N. N. - 1405
 Zavadvorskaya, E. K. - 288, 437,
 732, 1333
 Zavertkin, S. D. - 1186
 Zav'yalova, A. Yu. - 258

Zav'yalov, G. I. - 258
 Zelichenko, V. M. - 1588
 Zembatov, Kh. B. - 1183
 Zemlyanov, A. A. - 868
 Zhaksylykova, A. A. - 1209
 Zhaparova, S. - 698
 Zharov, S. N. - 440
 Zhdankin, A. P. - 724
 Zhdanov, V. A. - 265, 1750
 Zhdanov, V. M. - 716
 Zhdanov, V. V. - 951
 Zhdanova, V. N. - 951
 Zhemchuzhnyi, S. M. - 439
 Zherebtsova, L. I. - 1057
 Zhestkov, V. F. - 1362
 Zhilyakov, S. M. - 1024, 1452
 Zhirnov, N. I. - 51, 508, 630
 Zhizhin, E. D. - 1709
 Zhorovkov, M. F. - 975, 1357
 Zhukov, A. F. - 170
 Zhukov, A. V. - 265
 Zhukovskii, V. Ch. - 493, 1213
 Zil'bert, V. T. - 1498
 Ziling, K. K. - 1336
 Zimin, N. I. - 286
 Zinovik, M. A. - 1452
 Zlobin, V. I. - 1495
 Zlupko, V. N. - 590, 1363
 Zolotarev, V. F. - 594
 Zolotkov, V. D. - 465
 Zorin, E. I. - 546
 Zot'ev, B. P. - 636, 691
 Zubov, V. I. - 1615
 Zudov, A. I. - 900, 1496
 Zudova, L. A. - 900, 1496
 Zuev, L. B. - 605
 Zuev, V. E. - 583
 Zverev, V. V. - 1701, 1706
 Zyong, D. V. - 312

TABLES OF CONTENTS

SOVIET PHYSICS JOURNAL Volume 18, Numbers 1-12, 1975

(A translation of Izvestiya VUZ. Fizika)

Volume 18, Number 1 January, 1975

Engl./Russ.

Determination of the Parameters Characterizing the Superexchange Interaction in Complex Ferrite-Spinels — Sh. Sh. Bashkirov, A. B. Liberman, V. I. Sinyavskii, and S. I. Alekseeva	1	7
Thermomagnetic Effects in Iron—Cobalt Films — V. A. Buravikhin, I. V. Chernykh, V. V. Litvintsev, and V. N. Pelageikin.....	5	11
Development of a Notch in a Conductor in the Initial Stage of an Electrical Explosion — V. M. Volkov and I. A. Shaikevich.....	9	15
Effective Cross Sections of Hypercharge in the Case of Cadmium Atoms on Helium Ions at Thermal Velocities — V. F. Elaev and O. P. Semenova.....	13	19
Limiting Transitions in the Tolman Solution of the Equations of General Relativity — M. P. Korkina and L. M. Chernyi.....	17	23
Some Properties of the Gravitational Fields of a Hydrodynamical Fluid and Dust — V. I. Obosov	21	27
Statistical Simulation of Kinetic Processes in a Low-Temperature Molecular Gas Plasma — Yu. G. Basov, I. G. Voitik, and V. S. Mel'chenko.....	27	33
Investigation of the Compton Profiles for C, Si, and Ge — Z. I. Kuplyauskis and I. A. Yakimavichyus.....	31	38
An Electron in the Field of Two Classical Plane Waves Propagating in Slightly Different Directions — V. G. Bagrov, D. M. Gitman, V. N. Zadorozhnyi, and Sh. M. Shvartsman	34	42
Calculation of the Electronic Structure and Energetic Characteristics of Hydrocarbon Molecules by the CNDO/BW Method — V. P. Shcherbina, V. S. Cherkasov, Yu. A. Tishchenko, and V. I. Danilova.....	37	46
Interaction of a Quasistatic Crack with Ternary Boundary Junction — V. M. Finkel', A. M. Podkauro, V. P. Ivanov, and Yu. I. Tyalin.....	41	50
Spectroscopic Study of an RF Discharge in Nitrogen — A. I. Lyutyi, L. D. Mel'nikova, and N. L. Sokolova	46	56
New Approaches to the Study of Properties of the Generalized WKB Approximation. IV — N. I. Zhirnov and A. A. Sokolov	51	62
Development of Fluctuations in Propagation of Coherent Light in a Gas. II — F. A. Vorob'ev and R. I. Sokolovskii	56	68
Graviton—Photon Interaction — V. V. Skobelev.....	62	76
Model for Grouping Small Energy Transfers in Electron Transport Theory — A. V. Plyasheshnikov and A. M. Kol'chuzhkin	66	81
The Electromagnetic Field as a Finsler Manifold — G. S. Asanov	70	86
Determination of the Lagrangian of the Tetrad Gravitational Field — V. N. Tunyak.....	74	91
Determination of the Sources of the Tetrad Gravitational Field — V. N. Tunyak	77	94
Horizontal Paths and "Thomas's Precession" in the Theory of Gravitation — A. K. Lapkovskii and V. M. Laptinskii	80	98
Thermodynamic Compatibility of Thermal and Calorific State Equations in Statistical Method of Conditional Distributions — G. S. Bokun, V. S. Vikhrenko, I. I. Narkevich, and L. A. Rott.....	84	102

Angular Distribution of Electrons Scattered at Three-Nucleon Nuclei, Splitting Them into a Nucleon and a Deuteron — V. K. Tartakovskii, I. V. Kozlovskii, and A. D. Fursa.....	88	107
Behavior of a Test Body in a Plane Gravitational (Gravity) Wave — E. V. Borovko.....	92	112
Quantization of Torsion in a Space of Zero Riemannian Curvature — P. L. Poznanin.....	95	116
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Character of the Atomic Ordering in Eutectic Au—Si and Al—Si Alloys — Ya. I. Dutchak and V. S. Frenchko.....	101	122
Effect of Random Perturbations on the Energy Characteristics of a Laser — Yu. I. Nedranets and V. I. Berezin.....	103	124
Production of Low-Dislocation Single Crystals of Cu—Si Alloy and Study of the Dependence of the Microhardness on the Dislocation Density and the Percentage Content of Silicon in the Copper — A. G. Basariya and V. V. Sanadze.....	105	125
Statistical Model of a Crystal in a Hyperchain Approximation — E. A. Arinshtein and Ya. D. Grinshtein.....	108	127
Theory of Pair and Photon Formation by a Photon in the Nuclear Field — A. I. Smirnov.....	110	130
On the Question of the Radiation of a Hydrogenlike Atom — V. P. Semenov.....	112	131
Application of the Method of the Generating Functional to Find Equations for the Distribution Function — B. G. Abrosimov.....	114	132
Relation between the Energies of Vacancy Formation and the Coefficient of Thermal Expansion of Crystals — V. N. Bovenko.....	116	135
Method of the Two-Time Green's Function in the Theory of Heat Conduction of Metals — A. M. Ermolaev and I. I. Fal'ko.....	118	136
Annealing of Radiation ESR Centers in Alkali-Tellurite Glasses — T. G. Mikhailova.....	120	138
Temperature Dependence of the Strength Parameters for an FCC Lattice for Strains that Maintain the Tetragonal Symmetry — V. F. Konusov and A. M. Mikhailov.....	123	140
On the Question of the Population Mechanism of the State $5s^2 2D_{5/2, 3/2} (^2D^*)$ of Cadmium Ions in an He—Cd Laser — O. N. Semenova and V. F. Elaev.....	126	143
Shift of the Argon Atom Levels in an Electron Field According to Perturbation Theory — L. V. Gorchakov.....	129	146
Band Structure of Pyrrargyrite under Hydrostatic Pressure — E. I. Gerzanich, M. I. Golovei, M. I. Gurzan, S. A. Dob'yanskii, and D. V. Chepur.....	132	148
Statistical Sum of the Ising Model in a Zero Field for a Cubic Lattice (Heuristic Approach) — V. A. Romanovskii.....	134	150
Computation of the Domain-Boundary Mobility under Irreversible Displacements — V. G. Pustynnikov and V. M. Vasil'ev.....	136	152
Specific Heat of Two-Dimensional Ideal Quantum Gases — V. V. Ul'yanov and S. S. Sokolov.....	138	153
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Composite Spaces and the Covariant Spinor (Quark) Field Theory — V. P. Sevryuk.....	140	155
Interaction of a Radiation Field with a Classical Current — V. G. Bagrov, D. M. Gitman, V. A. Kuchin, and G. I. Flesher.....	140	155
Divergence Variation in a Quasiparallel Monochromatic Beam — R. K. Mirol'yubov.....	140	155
Structural Constants of Complex Crystals for Green's Function Energy-Spectrum Calculation — A. I. Nazhalov, V. E. Egorushkin, V. A. Popov, and V. I. Fadin.....	141	156
Production of VO_2 and V_2O_5 Films by Reactive Cathode Sputtering — V. V. Mokrousov and V. N. Kornetov.....	141	156
The Laws of Electrodynamics and Optics in a Frame of Reference Rotating with Respect to the Earth — G. B. Nikolaev.....	142	156
The EMF Generated in Polyethylene by a Proton Beam — A. P. Ar'yanov and Yu. P. Mal'yshkov.....	142	157

Effects of X-Ray Intensity in F-Center Buildup in NaCl Crystals — A. N. Kravets and M. M. Shafir.....	142	157
Work-Hardening in Ni(Al) Polycrystalline Materials — L. E. Popov, N. A. Aleksandrov, I. A. Grinyaeva, T. A. Kovalevskaya, and V. P. Chubis	143	157
Excitation Luminescence of Alkali Halide Crystals — S. T. Akerman, D. I. Vaisburd, V. T. Shkatov, and B. N. Semin.....	143	158
Spectrum Measurement for the Nanosecond Component of the Luminescence Excited in a Solid by a High-Density Electron Beam — V. T. Shkatov, B. N. Semin, S. G. Akerman, and D. I. Vaisburd	144	158
A Perturbation Theory Program for Calculating Molecular Interactions — V. S. Cherkasov, V. P. Shcherbina, and V. I. Danilova	144	159
Binet's Equation in the Theory of Relativity — V. M. Razorenov.....	144	159
ALGOL-60 Procedures for Molecular-Coordinate Calculations — V. P. Shcherbina, Yu. A. Tishchenko, and V. I. Danilova	145	159
Leo Studies in Practical Classes — V. D. Saprykin, A. I. Alekseenko, and V. P. Elagin.	145	160
Thermal Expansion of Sodium and Potassium Azides — V. N. Belomestnykh and M. S. Ivankina	146	160
Effects of p-n Layer Photo-EMF on the Response of a Scanistor — P. I. Gos'kov, T. S. Emel'yanova, G. N. Kozhukhova, L. I. Rusin, E. A. Sokolova, and Yu. K. Shelkovnikov	146	160
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Reversible Magnetization Processes in Ferrites under High Pressure — Yu. M. Khachatryan.....	246	121
The Nitrogen Laser in the Amplifier Mode — V. F. Tarasenko and V. V. Savin.....	249	124
Intensity Distribution in Rotational Structure of Molecular Bands of Nitrogen — A. A. Eliseev, T. N. Popova, and I. I. Matrosov.....	252	126
Method of Fundamental Regulation of the Energy of Electrons at the Exit of a Linear Accelerator — B. V. Bekhtev and I. S. Shchedrin.....	255	128
Broadening of the Hg 2537-Å Line as a Function of the Density of Hg Atoms in the Presence of Several Metals — A. Yu. Zav'yalova, G. I. Zav'yalov, and N. A. Prilezhaeva ..	258	130
Microdischarges on the Surface of a Dielectric in a Vacuum — É. N. Abdullin and S. P. Bugaev	260	132
Change in the Flow Stress of Beryllium Following Unloading — I. N. Khristenko and I. I. Papirova.....	263	134
Third-Order Moduli of Elasticity for Copper, Silver, Gold, Aluminum, Nickel, and Lead — V. A. Zhdanov, A. V. Zhukov, V. V. Dobrotvorskii, and N. A. Stakhin	265	136
Intensity of Oscillatory-Rotational Absorption Bands of Carbon Dioxide — N. I. Moskalenko.....	267	138
Atomization of the Film-Electrode Substance during Negative Corona Discharge of the Point-to-Plane Kind — O. L. Babinets and É. V. Ratnikov	271	141
Deposition of σ Phase in Mo-Re Alloys — N. I. Freze, A. D. Levitskii, A. N. Tyumentsev, and A. D. Korotaev	273	143
Conductivity of Benzene in the Dark — M. I. Bashmakova, P. A. Dolya, and A. A. Fedyanovich.....	275	144
The Uncertainty Principle — V. V. Ul'yanov	277	146
Some Demonstrations with Centimeter Radio Waves, Sound Waves, and Television — B. Sh. Perkal'skis, V. L. Larin, G. N. Sotiriadi, V. A. Sotkin, and Yu. P. Mikhailichenko	279	148
Breakdown in a Two-Layer Film of Tantalum Pentoxide — G. A. Vorob'ev and V. V. Motoshkin	283	151
CHRONICLES		
Second All-Union Conference on Kinetics and Growth Mechanics of Whisker Crystals and Thin Films.....	284	152

ABSTRACTS OF PAPERS DEPOSITED AT VINITI

Double Injection into Organic Solids and Carrier Dimerization — V. M. Fesenko	285	153
Atomic Distribution in a Substitutional Solid Solution Containing Interstitial Atoms — A. M. Olovyanishnikova, N. V. Nikitina, and E. F. Dudarev	285	153
New Exact Solutions to Schrödinger's Equation. Part 1 — N. I. Zimin, A. G. Meshkov and V. N. Shapovalov	286	153
Effect of a Steady Electric Field on the Emission Intensities of Helium Lines — A. M. Yancharina and I. I. Murav'ev	286	154
Low-Frequency Raman Spectrum of the Molecular Complex of Aniline with 2, 4, 5-Trichlorophenol — V. E. Volkov and P. G. Shkuryaev	286	154
Effects of Photoionizing Radiation on the Expansion of an Electron Avalanche — É. D. Lozanskii	287	154
Transducer Equivalent-Parameter Determination from Turning-Point Values for the Total-Current Vector — N. I. Prud'ko, L. M. Boiko, V. G. Bobyl', and S. I. Pugachev	287	154
Effects of Transducer — Specimen Gap on Capacitative Measurements of Semiconductor Electrical Conductivity — M. P. Basova and N. I. Pavlov	287	155
Temperature Change in Polyethylene under Electron Irradiation — E. K. Zavadovskaya, A. P. Ar'yakov, Yu. P. Malyshev, and B. Ya. Aizikov	288	155

Volume 18, Number 2 February, 1975

Interaction between Dislocations and Attachment Centers in Tellurium Monocrystals — A. M. Magdiev and G. B. Bagdjev	147	7
Physical Interpretation of the Parameters in the Generalized Kerr — NUT Solution. II — V. P. Semenov	150	11
Symmetry Properties of the Lattice Vibrations of Cadmium Diarsenide Crystals — A. S. Poplavnoi, Yu. I. Polygalov, and S. I. Skachkov	156	18
Mechanical Properties of the Alloy 36NKhTYu in Relation to the Mechanisms Underlying the Precipitation of the γ' and η Phases. III — V. F. Sukhovarov and R. P. Ivanova	161	22
Monte Carlo Simulation of the Kinetics of the Interaction of Nitrogen with Oxygen and Hydrogen in a Gas-Discharge Plasma — Yu. G. Basov, I. G. Voitik, and V. S. Mel'chenko	166	27
Saturation Level of the Intensity Fluctuations of an Optical Beam in a Turbulent Atmosphere — V. A. Banakh, A. F. Zhukov, V. L. Mironov, and R. Sh. Tsvyk	170	31
Ion-Beam Formation in a Vacuum Diode — S. P. Bugaev, V. I. Koshelev, and M. N. Timofeev	173	35
Stability Conditions of a Deformed Lattice — V. F. Konusov and A. M. Mikhailov	176	38
Method of Determining Absolute Cross Sections of Collisions of the Second Kind between $Hg(6^3P_{0,2})$ Atoms and Slow Electrons — A. I. Korotkov	179	42
Enhancement of UV Luminescence from Single Crystals of Zinc Oxide — V. A. Nikitenko, M. M. Malov, and P. G. Pas'ko	183	46
Sensitized UV Luminescence from Single Crystals of Zinc Oxide — V. A. Nikitenko and M. M. Malov	187	50
Effects Due to Field Displacement of Charged Vacancies in the Crystal Lattice of Cadmium Sulfide — A. V. Ignatov and V. V. Serdyuk	192	56
Construction of a Covariant Spinor Field Theory — V. P. Sevryuk	195	60
Recombination Luminescence of KI Crystals with a Sodium Impurity — L. P. Smol'skaya Diffraction of Electromagnetic Waves by Periodic Magnetic Structures. I — D. I. Sementsov and A. M. Morozov	201	67
Dielectric Relaxation in Aqueous Solutions and Suspensions. I. Solutions and Suspensions — M. P. Tonkonogov, V. A. Veksler, and K. Zh. Birzhanov	205	73
Dielectric Relaxation in Aqueous Solutions and Suspensions. II. Dielectric Losses and Structural Relaxation — M. P. Tonkonogov, V. A. Veksler, and K. Zh. Birzhanov	212	81

Electric and Magnetic Properties of Binary Ni-Ge Alloys — A. Karshibaev and M. Z. Ali-Zade	216	86
Polygonization and Restoration of Long-Range Order on Heating a Cold-Worked Iron — 6.5% Silicon Alloy — A. M. Glezer and B. V. Molotilov	220	91
Gravi-Inertial Reference Frames in Schwarzschild and Kerr Spaces — I. M. Dozmorov	224	95
Piezo-Thermoelectromotive Force in Strained p-GaAs Samples — I. F. Sviridov and V. A. Presnov	232	105
Low-Frequency Intensity Fluctuations of Radiation from a Distant Source in the Infrared Region of the Spectrum. II — M. V. Kabanov, A. A. Pershin and Yu. A. Pkhalagov	238	111
Kinetics of the Surface Charging of a Semiconductor during Adsorption — S. N. Kozlov ..	242	116
Effects of Activator Concentration, Temperature, and Partial Pressures of Hydrogen Atoms and Molecules on the Yield in Radical-Recombination Luminescence of ZuS-Ag Phosphors — V. S. Styrov, A. V. Kharitonov, and V. A. Sokolov	288	156
Energy Loss in Beta-Ray Scattering as a Function of Maximum Beta-Ray Energy — L. M. Boyarshinov	288	156
Proof of the Principle of Dimensional Homogeneity in the Equations of Physics — N. A. Bessonov	289	156
Hysteresis in the Voltage — Current Curves of Benzene — M. I. Bashmakova	289	157
Double-Scattering Studies with an Sr-90+Y-90 Beta-Ray Source — L. M. Boyarshinov	290	157
An Improved Scheme for Molecular-Geometry Optimization via Semiempirical Self-Consistent Field MOLCAO Methods — V. P. Shcherbina, Yu. A. Tishchenko, and V. S. Cherkasov	290	157
Choice of a Semiempirical Potential Curve for Hydrogen Bonds in a 2, 5-Diketopiperazine Crystal — L. F. Kon'shina and K. V. Mirskaya	290	158
Lattice Reflection by InS Crystals — N. F. Gakhramanov, N. M. Gasanly, and I. M. Ismailov	291	158
Effects of Relative Humidity on Radiation Attenuation by Atmospheric Aerosols. Part 2. The Microstructure Parameters of an Aerosol — S. D. Andreev, L. S. Ivlev, S. I. Popova, and Yu. A. Pkhalagov	291	158
Plastic Deformation and Young's Modulus Anisotropy in Sheets of Hexagonal Metals — D. I. Kozhin	291	158
Calculation of the Vibrational Spectrum of a Hematite Crystal — G. S. Sakash and I. V. Rigina	291	159
Photoresistive Effect in Scanistors and Skewness in the Voltage — Current Curves — P. I. Gos'kov, T. S. Emel'yanova, G. N. Kozhukhova, L. I. Rusin, E. A. Sokolova, and Yu. K. Shelkovnikov	292	159
Definition of Inertial Gravitational Radiation — A. K. Guts	293	160
Particle-Distribution Width in a Cell and Crystal Stability — É. A. Arinshtein, Ya. B. Gorelik, and Ya. D. Grinshtein	293	160

Volume 18, Number 3 March, 1975

X-Ray Investigation of Short-Range Order in the Liquid Eutectic Alloy Bi-Cd-Sn — Ya. I. Dutchak and V. S. Frenchko	295	7
Partial Diagonalization in Solving Electron-Nuclear Problems in Molecules — Yu. S. Makushkin and O. N. Ulenikov	299	11
Green's Function for a Three-Dimensional Oscillator in a Variable Uniform Electromagnetic Field — V. M. Chetverikov	304	17
Dispersion Laws in Crystals with a Simple Tetragonal Lattice. II — N. V. Kudryavtseva and L. V. Tikhonova	309	23
Strong-Coupling Method in the Kronig-Penny Model — A. M. El'dib, D. V. Zyong, A. A. Novakovich, and V. P. Sachenko	312	27
Covariant Calculation of Effective Cross Sections in Quantum Electrodynamics. I — Yu. S. Perov	316	31

Effects of Various Treatments on the Anisotropy in Magnetic Properties for Textural Specimens of $\text{Sm}_{0.5}\text{Pr}_{0.5}\text{Co}_5$ Made from Powder — V. S. Boidenko	320	35
Nature of the Low-Frequency Noise in Coherent Radiation — E. M. Kuznetsova	324	40
Temperature Dependence of the Macroscopic Elastic Limit for Polycrystalline Fe-Si Solid Solutions — L. A. Kornienko, E. F. Dudarev, V. E. Panin, V. I. Sarraf, and V. A. Brovko	327	44
Mechanism of the Degradation of Electronic Switches Built on Chalcogenic Glasses I. Low-Conductance Mode — V. I. Gaman and A. I. Badluev	332	50
Mechanism of the Degradation of Electronic Switches Built on Chalcogenic Glasses 2. High-Conductance Mode — V. I. Gaman and A. I. Badluev	337	56
Photoelectric Phenomena and Photoluminescence in Epitaxial CdSe Thin Films — A. G. Kornitskii, P. S. Kireev, and N. M. Kondaurov	342	61
Electron in a Quantized Plane-Wave Field and in the Classical Field of a Longitudinal Electric Wave — V. G. Bagrov, D. M. Gitman, and Sh. M. Shvartsman	347	67
Creation of Boson Pairs from Vacuum — V. G. Bagrov, D. M. Gitman, S. P. Gavrilov, and Sh. M. Shvartsman	351	71
Vibrational Spectra and Force Fields of Pyridine Complexes of Zinc Halides — V. I. Berezin and V. V. Ganin	355	75
Emission of Light during Interactions between Hydrogen Ions and Single Crystals — V. I. Alekseev, A. I. Bazhin, and V. G. Shul'ga	360	81
Covariant Calculation of Effective Cross Sections in Quantum Electrodynamics. II — Yu. S. Perov	363	85
Changes in the Magnetic Susceptibility and in the Bond Ionicity during Phase Transitions between Photoconductive Lead Oxides — L. P. Strakhov, K. M. Rashidkhanov, and V. A. Izvozhchikov	367	89
Internal-Friction Anisotropy in a Real Crystal and Construction of Characteristic Internal-Friction Surfaces — E. K. Naimi	371	94
Initiation and Development of Nanosecond Discharges in Liquids — V. V. Lopatin, V. Ya. Ushakov, and V. P. Chernenko	376	100
Sputtering of Zinc Sulfide Phosphors in Excitation of Radical-Recombination Luminescence by Atomic Hydrogen — V. G. Kornich, V. P. Pinchuk, and A. N. Gorban'	382	107
Comparison of Theory and Experiment for Dispersed-Phase Coalescence — V. I. Psarev and A. F. Kulikov	385	111
Gravitational Energy Flux in the Wave Zone under the Infeld Coordinate Conditions — N. M. Petrova	390	117
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Simulation of Motion of Dislocations through a Slip Band — G. I. Nichugovskii, S. I. Igonin, and A. A. Predvoditelev	394	122
Atomic Ordering in Ni-Fe-Cr Solid Solutions — K. G. Binnatov, A. A. Katsnel'son, and Yu. L. Rodionov	397	125
A Quasiclassical Expansion of Solutions of the Schrödinger Equation for a Step Potential — V. V. Ul'yanov	399	126
Synthesis of Yttrium-Iron Garnet Single Crystals from $\text{PbO-PbF}_2\text{-B}_2\text{O}_3$ Solutions — M. A. Stel'mashenko, S. I. Lavrova, E. N. Agartanova, V. E. Ginsar, and A. V. Kochetkova	401	128
Dislocation Structure of Copper Produced by a High-Intensity Electron Pulse of Length $10^{-8}\text{-}10^{-7}$ sec — V. P. Rotshtein, L. S. Bushnev, and D. I. Proskurovskii	404	130
Effects of Adsorption and Desorption on the Temperature Dependence of Radical-Recombination Luminescence — V. V. Styrov and L. I. Yagnova	406	132
Self-Propagating High-Temperature Synthesis of Silicides and Nickel-Titanium Compounds — V. I. Itin, Yu. S. Naiborodenco, A. D. Bratchikov, N. P. Butkevich, S. V. Korostelev, and L. V. Sholokhova	408	133
Production of Cation Vacancies in Alkali Halides by Ionizing Radiation — A. A. Vorob'ev, Yu. M. Annenkov, V. F. Pichugin, T. S. Frangul'yan, and A. P. Nesterenko	410	135

Magnetic Anisotropy and Coercivity of AlNiCo-Alloy Films — R. N. Ganzha, A. V. Dolyuk, D. A. Laptei, and N. M. Salanskii	412	137
Dependence of Radical-Recombination Luminescence of ZnS-Ag Phosphor on Excitation Conditions — V. V. Styrov, A. V. Kharitonov, and V. A. Sokolov	415	139
Hyperfine Interactions in $Y_3Co_{0.5x}Ti_{0.5x}Fe_{5-x}O_{12}$ Ferrites — P. P. Kirichok, L. G. Kustovskii, Yu. S. Avraamov, L. M. Letyuk, I. N. Bibolov, Sh. S. Madumarov, and V. Ya. Garmash	417	141
Effects of Residual Strain on the Interference Spectra of GaS Single Crystals — A. I. Malik, Z. D. Kovalyuk, and G. B. Dylevskii	420	144
Hard-Sphere Model and Viscosity of Liquid Metals — A. M. Korsunskii, V. E. Sivolap, and A. G. Bondareva	422	145
Effect of Diffuse Boundaries on the Electronic Properties of Metals — V. V. Ul'yanov and S. E. Kal'noi	425	147
Effect of Infrared Radiation on the Spectral Characteristics of the Electroluminescence of ZnS-Cu Single Crystal — A. M. Nemchenko	427	149
Account of Polarization Effects in the Enveloping-Surface Method in the Classical Theory of Synchrotron Radiation — A. B. Kukanov and N. D. Naumov	429	151
Separation of Variables in the Klein-Gordon Equations. IV — V. G. Bagrov, A. G. Meshkov, V. N. Shapovalov, and A. V. Shapovalov	431	152
Physically Transparent Derivation of the Hartree-Fock Equations — M. F. Sarry	433	154
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Spinors in Reference-Element Space — V. P. Sevryuk	435	156
Acoustic and Thermodynamic Characteristics of Alkali Chlorates — V. N. Belomestnykh and N. D. Tolmacheva	435	156
Calculation of the Generalized Gruneisen Parameters for Molecular Crystals — V. V. Kononova	436	156
Interferometric Determination of the Temperature Distribution for Natural Convection in the Field of a Corona Discharge — V. P. Ignatov, Yu. P. Mikhailichenko, and B. Sh. Perkal'skis	436	156
An Apparatus for Examining the Properties of Electrets — Yu. M. Annenkov, S. G. Boev, G. M. Malofienko, and G. I. Sigaev	436	156
Intense Electron Emission from Insulators Exposed to a Pulsed High-Density Electron Beam — I. N. Balychev, D. I. Vaisburd, and G. I. Gering	437	156
Electrical Conductivities of Some Polymer Insulators in Strong Electron Fields — E. K. Zavadovskaya, A. P. Ar'yanov, and O. G. Kazakov	437	156
Strength and Electronic Structure in Fe-Ni Alloys — L. K. Zamiryakin, V. M. Kalinin, and Z. E. Dubnik	438	156
Theory of Fluctuations in Quasiharmonic Oscillators: Amplitude Fluctuations — B. E. Sobotkovskii and B. F. Alekseev	438	156
Comparative Study of IR Absorption Spectra and Raman Spectra. Part 1. Pyridine — A. M. Gzogyan, G. I. Baranov, and A. V. Sechkarev	438	156
Weight and Weightlessness — S. M. Zhemchuzhnyi	439	156
An ESR Study of the Crystalline Field in A_2B_6 - A_2B_6' Solid Solutions — A. A. Andreev, M. F. Bulanyi, and F. F. Kodzhespirov	439	156
Baroluminescence in the Measurement of Dispersion Spectra — O. S. Nikolaev and A. Ch. Mashek	440	156
Fundamental Absorption-Edge Shift and Inherent-Defect Production in Cadmium Sulfide Films — S. N. Zharov and A. V. Nekrasov	440	156

Electrooptical and Photoelastic Phenomena in Ferroelectric Crystals (Survey) — A. T. Anistratov	441	7
--	-----	---

Pair Production in an Electric Field Applied for a Short Time — D. M. Gitman, V. M. Shakhmatov, and Sh. M. Shvartsman	455	23
New Exact Solutions to Dirac's Equation. I — V. G. Bagrov, D. M. Gitman, V. N. Zadorozhnyi, P. M. Lavrov, and V. N. Shapovalov	461	29
Anomalous Thermal Bleaching of Color Centers in Calcium Fluorapatite — L. N. Aleksandrov, V. D. Zolotkov, and V. S. Mordyuk	465	34
Influence of Surface Wetting on the Dimensions of a Vapor Bubble — I. I. Markov	468	38
Photoelectric and Optical Properties of Thin Films of Ternary Chalcogenides of the Form $MeI_{SbX_2}^{VI}$ — V. A. Bazakutsa, N. I. Gnidash, A. K. Kul'chitskaya, and A. V. Salov	472	42
Gravitational Radiation of a Two-Body System of Arbitrary Shape — S. P. Fedorova	476	47
Zitterbewegung of Particles with Arbitrary Spin — S. V. Izmailov and E. S. Levin	481	52
A Description of Particles with Extension in Nonlinear Field Theory — V. P. Nisichenko and Yu. P. Rybakov	489	61
The Creation and Annihilation of Electron-Positron Pairs in an Ultrapowerful Magnetic Field — A. A. Sokolov, I. M. Ternov, A. V. Borisov, and V. Ch. Zhukovskii	493	65
Constancy of the Speed of Light in the General Theory of Relativity — V. S. Kiriya	499	72
Magnetic Aftereffects and the Barkhausen Effect in a Magnesium Manganese Ferrite Single Crystal — V. F. Pavlov and A. I. Drokin	503	77
New Approaches to the Generalized WKB Approximation. V — N. I. Zhirnov and A. A. Sokolov	508	81
Influence of the Radiative Reaction Force on a Particle in a Kerr Field — V. R. Khalilov and G. A. Chizhov	513	87
Baryon-Gravimeson Interactions in Nonlinear Quark Theory. IV — E. F. Kurdgelaidze and Kh. Funke	516	91
Optical Properties and Electronic Characteristics of Liquid Solutions of Nickel in Silicon — K. M. Shvarev, B. A. Baum, and P. V. Gel'd	521	96
Thermal Diffusion of Hydrogen in Ferromagnetic Materials — S. I. Masharov and N. M. Rybalko	525	100
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
General Solution of Maxwell's Equations for an Azimuthally Magnetized Ferrite Medium — V. A. Meshcheryakov, A. E. Mudrov, and G. A. Red'kin	528	104
Substructure and Anomalous Optical Properties of Island Gold Films — L. S. Palatnik, V. V. Efimovskii, and V. I. Shkaleto	530	106
Infrared Radiation Indicator Based on $SbSI$ Ferroelectric-Semiconductor — V. V. Fedak, D. G. Semak, D. V. Chepur, and A. A. Kikineshi	533	109
Statistical Principles for Proving the Existence of Sources of Electric Discharges in the Lithosphere — A. A. Vorob'ev, L. A. Zashchinskii, V. D. Evseev, and V. N. Kurchin	536	111
Deep Impurity Levels in Solid Solutions of $Al_xGa_{1-x}As$ Doped with Tellurium — Yu. E. Maronchuk, A. P. Sherstyakov, and N. A. Yakusheva	539	113
On the Nature of Spontaneous Rupture of F Centers in Alkali-Halide Crystals — Yu. M. Annenkov, V. F. Pichugin, and T. S. Frangul'yan	541	114
Migration of Excitation Energy in Calcium Sulfide Activated by Bismuth and Manganese — I. Yu. Petrova, M. -L. Yu. Allsalu, A. V. Barybin, and V. V. Mikhailin	543	116
On the Electrical Activity of Boron and Phosphorus Implanted in Silicon — Yu. N. Shutov, E. I. Zorin, P. V. Pavlov, and D. I. Tetel'baum	546	118
Twinning in Beryllium-Copper Alloys. II — M. E. Bosin, I. I. Papirov, and N. G. Yakovenko	549	120
An Application of the Enveloping-Surface Method in the Classical Theory of Radiation — A. B. Kukanov and A. V. Konstantinovich	551	122
Theory of Nonlinear Response — R. M. Yul'met'ev	554	124
Diffusion of ^{63}Ni and ^{55}Fe in Ni-NiMo and Fe-Fe ₂ Nb Eutectic Compositions — A. M. Blinkin, L. S. Ozhigov, A. I. Somov, A. P. Svinarenko, A. S. Tortika, and Yu. F. Khripkov	556	126

Low-Energy Scattering by Spheroidal Potentials — V. I. Gurkov and L. G. Yakovlev	558	127
Excitation of Two-Frequency Spin-Echo Signals by Various Sequences of RF Pulses — V. S. Grechishkin, E. M. Shishkin, and S. A. Voronkov	561	130
Energy Characteristics and Ion Emission from a Vacuum Creepage Spark — V. G. Shpak	563	131
Long-Range Interactions between Spinors and a Torsion Field by Means of Photon Exchange — P. L. Poznanin	566	134
Calculation of Spin Hamiltonians of Rank Zero in a Permutation Model. II — B. A. Men' and P. T. Varshavskii	568	136
Study of the Band Structure of Complex Semiconductors by Using the Photodielectric Effect (PDE) — A. S. Borshchevskii, A. M. Kunaev, S. G. Kusainov, and Yu. V. Rud'	572	140
Optical Absorption in $ZnSiAs_2$ Crystals — G. K. Averkieva, G. I. Pichakhchi, V. D. Prochukhan, Yu. V. Rud', M. Tashtanova, and T. V. Rybakova	575	142
Exchange Mechanism of Energy Transfer between Molecules — G. F. Banakh and A. F. Terpugova	578	144
Doubly Excited Configurations and Interpretation of Molecular Electronic Spectra — G. V. Mayer and A. F. Terpugova	580	147
Effect of the Microphysical Characteristics of Aerosols on Predictions of Their Optical Properties. II. Imaginary Part of the Complex Refractive Index — V. E. Zuev, L. S. Ivlev, G. M. Krekov, and R. F. Rakhimov	583	149
Vitrification and Threshold Switching in the Si—As—Te—I System — N. T. Gurin, V. V. Khiminets, D. G. Semak, I. D. Turyanitsa, and V. V. Fedak	586	151
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Magnetic Field of a Stellarator of Elliptical Cross Section — I. K. Karpenko	589	155
Photoconductivity in $AgAsS_2$ and $AgSbS_2$ Crystals — I. I. Golovach	589	155
Calculation of Orbital and Effective Cation Radii for Group 8 Elements — G. A. Korablev, and A. N. Men'	589	155
Passage of Low-Energy Electrons through Matter (Review) — V. B. Kuznetsov and I. M. Rubinovich	590	156
The Double Compton Effect. Part 2 — A. I. Smirnov	590	156
Complete Sets and Variable Separation in Dirac's Equation — V. N. Shapovalov, V. G. Bagrov, and G. G. Ekle	590	156
Ion Emission by Alkali Aluminosilicates — V. N. Zlupko, A. K. Kutasevich, and L. S. Savchin	590	156
Nature of Adsorption Luminescence — V. G. Kornich and I. D. Napora	591	157
Electronic Absorption Spectra of Nitrobenzoic Acids — L. I. Loboda and Yu. P. Morozov	591	157
Generalization of a Group of Nonlinear Equations in Heat and Mass Transfer — G. A. Khalikov	591	157
The Energy-Momentum Tensor in Conformal Space — A. V. Nosovets	592	158
Motion of Charged Fermi Particles with Anomalous Electromagnetic Moments in External Fields — Yu. I. Klimenko	592	158
Relaxation of the Radiation-Induced Optical Absorption in Alkali-Halide Crystals — Yu. M. Annenkov, V. F. Pichugin, T. S. Fragul'yan, and É. M. Yarosh	592	158
Effects of Dislocation Density of the F-Center Concentration in Alkali-Halide Crystals — Yu. M. Annenkov and T. S. Fragul'yan	593	158
Thermoelectric Eddy Currents and Transverse Thermo-emf for a Two-Layer Structure Containing a p-n Junction — L. I. Anatychuk, V. T. Dimitrashuk, and O. Ya. Luste	593	159
Acoustic and Elastic Properties of Some Liquid n-Paraffins — N. F. Otpushchennikov, B. S. Kir'yakov, P. P. Panin, and Yu. F. Melikhov	593	159
Laser-Induced Dislocations in Molybdenum — R. R. Larina and L. I. Mirkin	594	159
Inelastic Behavior of Materials in Martensite Transformations — V. N. Khachin and L. A. Solov'ev	594	160
Effects of an Insulating Medium on Prebreakdown Electroluminescence — V. P. Golovikhina, V. F. Zolotarev, and R. V. Kuznetsova	594	160

The Optimal Detector System for Charged-Particle Identification — L. P. Lenisov and N. M. Smirnov	595	160
--	-----	-----

Volume 18, Number 5 May, 1975

Weak Cylindrical Gravitational Waves — V. E. Radchenko.....	597	7
Calculation of Spin Hamiltonians of Rank 0 in a Permutation Model. I — B. A. Men' and P. T. Varshavskii.....	601	12
On the Mechanism of the Electric Field Effect on Dislocation Mobility in Alkali-Halide Crystals — L. B. Zuev, V. E. Gromov, V. P. Sergeev, and A. N. Narozhnyi.....	605	16
Effect of Pretreatment on Microdeformation Development in hcf Polycrystals of Substitutional Solid Solutions — E. F. Dudarev, V. E. Panin, L. A. Kornienko, L. D. Dikuser, and V. A. Brovko.....	610	21
T-Matrix for the Morse Potential — S. S. Tokar' and Yu. K. Tomashuk	615	27
Determining the Height of Potential Barriers in Metal — Dielectric — Metal Tunnel Structures by the Method of Derivatives of the Volt — Ampere Characteristics — V. P. Severdenko, V. A. Labunov, E. E. Tkharev, A. P. Kazantsev, and S. A. Zaidman	618	60
Angular Distribution of Electrons behind Barriers Comparable to the Extrapolated Range — V. I. Boiko and V. V. Evstigneev.....	623	35
Einstein's Paradox and a New Mixing Paradox — I. P. Bazarov.....	626	39
Generalized WKB Method in the Three-Dimensional Case. I — N. I. Zhirnov and F. B. Nurlygayanov.....	630	43
Current-Voltage Characteristics of Gallium Arsenide Thin Films in a Quantizing Magnetic Field — B. P. Zot'ev and E. V. Ivanov.....	636	50
Positive Ion Emission during the Interaction of Dissociated Gases with Alkali-Halide Crystals — V. F. Kharlamov and V. V. Styrov.....	640	54
Kossel Patterns in Research on Diffusion in Single Crystals — I. G. Ivanov, E. Z. Ryabinina, and Vo Nong Viet.....	645	60
Electromagnetic Wave Diffraction by Periodic Magnetic Structures. II — A. M. Morozov, D. I. Sementsov, and Yu. V. Kornev	649	64
Resistance to the Motion of Dislocations due to the Breakdown of Short-Range Order in Substitutional Solid Solutions Containing Interstitial Impurities — A. M. Olovyanishnikova, N. V. Nikitina, and E. F. Dudarev	653	68
On the Symmetry of a Linear Second-Order Equation of Nonparabolic Type — V. N. Shapovalov	657	72
Exciton Absorption of Light in a Smooth Random Field — V. D. Iskra.....	660	76
Cathodoluminescence of ZnS Single Crystals Subjected to Thermal Annealing in Vapors of the Constituents — N. K. Morozova, M. M. Malov, and M. M. Veselkova.....	667	84
Oxygen-Phase-State Changes in ZnS Single Crystals Annealed in Vapors of the Constituents — N. K. Morozova, M. M. Malov, M. M. Veselkova, and B. A. Kurbatov.....	672	89
Formation of Structure in the Zone of Internal Oxidation in Copper-Base Alloys — M. P. Bondar', N. V. Gubareva, and T. S. Teslenko.....	677	95
Domain Structure of Silicon Iron Single Crystals — V. I. Efimov.....	682	100
Mixed Problem for the Einstein Equations — É. I. Kucherenko and A. V. Loskutov	686	104
Size Effect on the Longitudinal Magnetoresistance of Thin Films of n-Type Ge — B. P. Zot'ev, É. V. Skubnevskii, and A. T. Dudarev.....	691	110
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Temperature Dependence of Radiation Defect Buildup in Doped CaF ₂ Crystals — V. M. Lisitsyn and V. F. Shtan'ko	695	116
Radiation-Stimulated Transformation of F- and M-Centers in CaF ₂ Crystals		

— V. I. Korepanov, V. M. Lisitsyn, A. I. Baranov, V. G. Stepanov, and S. Zhaparova	698	118
Temperature Characteristic of the Electroluminescence Excitation Level in Anthracene Films — N. V. Vityuk and V. V. Mikho	701	120
Domain Restructurization in Ferroelectrics within the Phase Transition Range — V. S. Rumyantsev and V. M. Rudyak	704	122
Effect of γ Radiation on the Electrical Properties of the Al—Si ₃ N ₄ —Al System — Yu. A. Burachevskii	707	124
Three-Photon Annihilation of Electron—Positron Pairs — A. I. Smirnov	709	126
Finsler Method for Studying Noninertial Reference Systems of a Charge — G. S. Asanov	711	127
A Metric of Event Space — L. S. Kuz'menkov	714	130
Positron Annihilation in Vitreous As—Se and As—Sn—Se Systems — V. I. Mikhailov, V. M. Zhdanov, and A. D. Tsyganov	716	131
Photoelectric Characteristics of Silicon—Zinc Sulfide Photoresistors — A. S. Petrov, M. A. Petrov, P. E. Ramazanov, A. A. Usherenko, and M. P. Furman	718	133
Gravitational Strings in Models for Elementary Particles — D. D. Ivanenko and A. Ya. Burinskii	721	135
Nature of the Edge Absorption in Amorphous and Crystalline BiSeI Type Films — O. V. Luksha, A. P. Zhdankin, L. M. Suslikov, N. I. Dovgoshei, and V. Yu. Slivka	724	137
A CNDO/2 Model for an H Bond — V. A. Pimenov, B. B. Fainitskii, and V. E. Volkov ..	727	139
EPR Spectra of Fe ³⁺ and Gd ³⁺ Ions in Yttrium—Gallium Garnet — R. F. Uchaikina, M. A. Stel'mashchenko, V. E. Ginsar, S. I. Lavrova, and E. N. Agartanova	729	141
Radiation Resistance of Glasses and of Solids which Contain Oxygen — A. A. Vorob'ev, E. K. Zavadovskaya, V. A. Starodubtsev, V. G. Vakhromev, S. G. Boev, and V. N. Sal'nikov	732	143
Measuring the Specific Charge of an Electron by the Compensation of Its Deflections in Uniform Electric and Magnetic Fields — G. I. Dluzhnevskii	735	146
Specific Heat and rms Displacements of Atoms in Substances with a Sphalerite Structure — V. I. Bogdanov, V. T. Bublik, Yu. Kh. Vekilov, and I. S. Smirnov ...	738	148
Effect of Diffusion on Space-Charge-Limited Transient Currents — V. T. Ivanov, O. A. Ponomarev, and I. A. Shamsutdinov	740	150
Effect of Polarization Charges on the Current in CdS Single Crystals — A. L. Rvachev and M. V. Sholkina	743	152
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Optimal Parameter Definition for Detector Systems for Identifying Charged Particles — F. P. Denisov and N. M. Smirnov	746	155
Hypochromism in Carbazole Crystals — V. L. Grebneva, L. A. Nakhimovskaya, and V. G. Topol'skii	746	155
Demonstration of the Acoustic Doppler Effect — B. I. Kal'yanov and N. F. Erokhin	746	155
IR Absorption Spectra of Cholesteryl Formate and Phase Transitions — L. S. Gorbatenko and T. P. Myasnikova	747	156
Effects of Dislocation Distribution in a Slip Zone on the Dislocation Accumulation Rate in Deformation — L. E. Popov, I. A. Grinyaeva, and V. L. Popov	747	156
The Electronic Energy Levels and Properties of the CaO Molecule (A Review of Research on the Properties of the CaO Molecule) — G. A. Volynets and G. V. Kovalenok	748	156
The Critical Twinning Stress — L. E. Popov, I. A. Grinyaeva, and T. A. Kovalevskaya ..	748	157
Temperature Dependence of Electroluminescence Decay in ZnS—Cu Phosphors — B. G. Chernyavskii, V. B. Levina, A. V. Makienko, and N. I. Yakubovich	748	157
An Error in Michelson's Experiment — V. A. Yurkov	749	157
Pair Production and the Dirac Field in the Zero-Plane Formation — V. G. Bagrov, D. M. Gitman, and Sh. M. Shvartsman	749	158
Electronic Spectrum Calculation for Some Biologically Important Amino Acids — Yu. A. Tishchenko and V. I. Danilova	749	158

IR Absorption Spectra and Phase Transitions of Some Homologous pp-Dialkoxyazoxybenzenes — A. P. Kapustin and L. S. Gorbatenko	750	158
Motion of an Electron in a Uniform Magnetic Field and the Field of a Planar Electromagnetic Wave — D. M. Gitman and P. M. Lavrov	750	159
Temperature Dependence of the Resistance and Perpendicular-Anisotropy Constant for Permalloy Films — A. I. Berezhnyakov and S. P. Movchan	750	159
Trends in the Temperature Dependence of the Elastic Parameters of Alkali-Halide Solid Solutions — V. L. Ul'yanov and A. A. Botaki	751	159
Low-Temperature Resistance Anisotropy in Ferromagnetic and Antiferromagnetic Alloys — V. A. Klimenko and S. I. Masharov	751	160
Errata	752	160

Volume 18, Number 6 June, 1975

Interaction of a High-Temperature Plasma with Electromagnetic Radiation in a Gravitational Field. I. General Theory — Yu. G. Ignat'ev	753	7
Quadratic Lagrangians and Massive Gravitons — P. L. Poznanin	760	15
Radiative Relaxation of a Relativistic Electron Gas in a Constant Homogeneous Magnetic Field — V. R. Khalilov, G. A. Chizhov, and V. N. Rodionov	765	20
Effect of Selenium on the Thermoelectric Properties of Tellurium — P. M. Shurygin, A. M. Orlov, and Yu. G. Lebedev	769	25
Charge Symmetry of Wave Functions for an Electron in a Quantized Electromagnetic Wave Field — M. V. Fedorov	773	29
Effect of the Length of Action of a Steady Electric Field on the Polarization Buildup Process in Triglycene Sulfate and Barium Titanate Single Crystals — V. M. Rudyak, V. F. Gornostaev, V. M. Labutin, and V. P. Kamentsev	777	34
Dependence of the Scattering Amplitude on the Form of the Overlap Function — S. A. Azimov, G. G. Arushanov, and I. I. Pirmatov	781	39
An Investigation of the Electronic Structure of Silver Azide by the Photoemission Method — Yu. A. Zakharov, A. E. Cherkashin, L. V. Kolesnikov, and S. V. Koshcheev	786	44
CuAlS ₃ Crystalline Lattice Dynamics — A. S. Poplavnoi and V. G. Tyuterev	792	51
Symmetry of Dirac-Fock Equation — V. N. Shapovalov	797	57
Three-Dimensional Phase Diagram of a Ferroelectric — V. Kh. Kozlovskii	803	64
Two New Constraints on the Electromagnetic Form Factors of Hadrons — Yu. M. Lomsadze, V. I. Kelemen, and M. G. Krikheli	808	69
Generalized Bethe-Peierls-Guggenheim Relations in the Theory of Critical Phenomena — V. B. Magalinskii	813	74
Elementary Components of Buildup Curve for F ₁ -Centers in KCl at Room Temperature — N. N. Sirota	817	78
Interaction of Self-Excited and Stimulated Oscillations in the Synchronization of Thomson Systems — M. N. Merzlyakova	820	81
Profile of Spectral-Line Intensity along a Negative Glow — R. G. Karimov and I. I. Murav'ev	825	87
Polarons of Small Radius in Vanadium Pentoxide. Polaron Absorption in Vanadium Pentoxide — D. S. Volzhenskii and V. G. Savitskii	829	91
A Statistical Model of the Electrostatic Field at a Dielectric Surface — A. A. Vorob'ev, L. A. Zashchinskii, and A. G. Ivanchin	832	95
Green's Function for an Electron in the Field of a Quantized Wave — M. V. Fedorov	836	99
Dependence of Yield of Radiation-Induced Defects and Their Energy Capacity on Initial-State Density — D. I. Vaisburd and N. N. Sirota	840	104
Interaction of a High-Temperature Plasma with Electromagnetic Radiation in a Gravitational Field. II. $\kappa_B T_e \ll mc^2$ — Yu. G. Ignat'ev	845	109
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Covariant Approach in the Method of the Lorentz Self-Action Force — A. B. Kukanov and N. D. Naumov	853	120

Temperature Dependence of Resistivity and Coefficient of Thermo-emf of Bismuth Films — D. V. Yakashvili, V. N. Vigdorovich, and G. A. Ukhlinov.....	856	122
Cathode Luminescence of Nd^{3+} and Tu^{3+} Ions in the GdAlO_3 Lattice — P. A. Arsen'ev, Kh. V. Khasan, and M. V. Chukichev.....	858	124
Reflection of Circularly Polarized Waves at the Boundary of a Nonlinear Medium — A. Ya. Terletsii.....	862	128
Ion Emission and Luminescence due to Interaction between Hydrogen Atoms and the Surface of Zinc Sulfide — A. I. Bazhin and E. M. Malinenko.....	863	129
Some New Products of Distributions in Quantum Field Theory — I. Ya. Viner.....	865	130
Deformation and Stability of a Transparent Drop in an Intense Light Field — A. A. Zemlyanov.....	868	132
Current Rise in the Initial Stages of Vacuum Breakdown between Plane Electrodes with Slowly Increasing Voltage — A. F. Shubin and Ya. Ya. Yurike.....	870	134
Multiple Breakdown of Dielectric Films — E. V. Ivanova.....	873	136
Integral Transition Effect in an Ionization Calorimeter — E. B. Bhoshin, V. V. Ryzhov, and A. M. Kol'chuzhkin.....	875	138
Low-Energy $\pi\pi$ Scattering on the Hard-Pion Current-Algebra Model — G. M. Radutskii.....	877	139
Coalescence of the Reinforcing Particles in a Dispersion-Hardened (Precipitation- Strengthened) Nickel-3 Vol. % Hafnium Dioxide Alloy During High-Temperature Creep — B. N. Babich, L. S. Bushnev, and Yu. R. Kolobov.....	879	141
Broadband Photoresistor Receiver at a Wavelength of $10.6\ \mu$ — V. V. Butkov and G. I. Tyul'kov.....	882	143
On an Investigation of the Nature of the Deformation of Electron Spectra beyond Barriers — V. A. Lisin.....	884	145
Anomalous Strong Magnetic Quenching of the I_2 Longer Lifetime for Positrons in Ionic Crystals — K. P. Aref'ev, E. P. Prokop'ev, and S. A. Vorob'ev.....	886	147
Influence of the Fusion Mode on the Characteristics of "Long" Germanium Diodes — A. A. Vilisov, V. P. Voronkov, and V. M. Diamant.....	888	148
On the Theory of Phase Transitions in the Statistical Formalism of a Large Canonical Ensemble — I. I. Narkevich.....	891	150
Investigation of "Long" Germanium Diodes with Negative Differential Resistivity — A. A. Vilisov, V. P. Voronkov, and V. M. Diamant.....	894	152
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
The Nakayama — Hay Method Applied to Molecular Geometry — V. V. Savushkina and V. I. Danilova.....	897	155
Effects of Concentration on the Line Spectra of Frozen Solutions of Aromatic Compounds in n-Paraffins — L. A. Mishina, L. A. Nakhimovskaya, and K. A. Sviridova.....	897	155
Internal Friction in Iron in an Elastic Field — A. A. Rodionov.....	898	155
Pair Production by a Single Photon Colliding with Two Planar Electromagnetic Waves of Arbitrary Polarization — N. N. Byzov, Yu. I. Klimenko, N. I. Fedosov, and A. I. Khudomyasov.....	898	156
A Method of Examining Low-Momentum Potential Scattering — A. F. Grashin and V. I. Mityagin.....	898	156
Radical-Recombination Luminescence in Halophosphate Phosphors — Yu. A. Sivov, V. D. Khoruzhii, Yu. M. Naslednikov, and V. A. Sokolov.....	899	156
Emission from an Electron in a Planar Electromagnetic Wave — D. M. Gitman and P. M. Lavrov.....	899	156
Emission from a Relativistic Electron in the Field of a Planar Electromagnetic Wave — N. N. Byzov, Yu. I. Klimenko, N. I. Fedosov, and A. I. Khudomyasov.....	899	157
Films of Solid Solutions Based on Tin Telluride and Lead Chalcogenides on Glass Substrates — M. A. Galushchak.....	900	157
Fractional Thermal Depolarization and the Thermally Stimulated Depolarization Current in Anodic Oxide Films on Tantalum — L. A. Zudova, S. I. Agapova, A. I. Zudov, and V. A. Sterkhov.....	900	157

Incorporation of All Valency Electrons in Calculations on Silicon Halides — V. I. Danilova, V. P. Shcherbina, and L. V. Gorchakov	900	158
Roll's Results and the Quantization of K_F for Metals — A. M. Korsunskii	901	158
Space — Charge Accumulation in Poor Conductors with Inhomogeneous High-Energy Electron Injection — O. B. Evdokimov, B. A. Kononov, and N. I. Yagushkin	901	158
Theory of Double Bremsstrahlung — A. I. Smirnov	901	159
The Electromechanical Effect in Indium Phosphide — V. A. Kim, N. V. Siukaev, and E. S. Slonova	902	159
Nonuniform Creep in Zinc Single Crystals — V. A. Labzin, V. V. Bazhenov, V. N. Kovatsenko, and V. I. Vlasov	902	159
Current, Field, and Temperature Distributions in a Cylindrical Wire with Temperature-Dependent Conductivity — R. S. Kuznetskii	902	159
The Metric of a Matter-Filled Space with Planar Symmetry — E. V. Borovko	903	160
Linking of Planar-Symmetry Spaces — E. V. Borovko	903	160
Indirect-Transition Selection Rules for Crystals of Space Group Td^6 — G. F. Karavaev ..	903	160
Electronic Absorption Spectra of Saturated Acids and Salts — L. A. Kolubaeva and Yu. P. Morozova	904	160

Volume 18, Number 7 July, 1975

New Exact Solutions to Dirac's Equation. 3 — V. G. Bagrov, D. M. Gitman, V. N. Zadorozhnyi, P. M. Lavrov, and V. N. Shapovalov	905	7
Fundamental Problems of the Electrodynamics of Electrons in the Quantized Field of a Plane Wave. II — V. G. Bagrov, D. M. Gitman, V. A. Kuchin, and P. M. Lavrov	909	11
The Solid Sphere Model in Studies of Crystal Stability — É. A. Arinshtein and Ya. B. Gorelik	913	15
Theory of a Waveguide Laser — N. G. Preobrazhenskii and S. L. Shirikova	916	17
Construction of an Anisotropic Crystal Potential — V. E. Egorushkin, A. I. Nazhalov, and V. P. Fadin	920	22
The Relation between Particle Wave Functions in a Classical and Quantum Electromagnetic Wave — A. F. Kazakov	925	27
Effect of a Third Component on Ordering of Substitutional Alloys with Anisotropic Interatomic Interactions — V. A. Klimenko and S. I. Masharov	930	32
Formation of F Centers in $KCl-PbCl_2$ Crystals Grown from Aqueous Solutions — N. S. Kravchenko	935	38
Atomic Order and Effective Characteristic Temperature of Cu—Al (12 at. % Al) Alloy — S. V. Sveshnikov and A. A. Katsnel'son	939	42
An Investigation of Unsteady Acoustic Absorption in α -Quartz Single Crystals — A. G. Smagin	942	46
Nonlinear Molecular Scattering of Light in Crystals — S. N. Kosolobov and R. I. Sokolovskii	947	52
Effects in the Interphase Boundary with Contact Melting in Three-Component Systems — L. K. Savitskaya, V. V. Zhdanov, V. N. Zhdanova, and A. P. Savitskii	951	56
Observation of Radio-Frequency Pulses Produced by Heating Crystals and Minerals in Vacuum — A. A. Vorob'ev, V. N. Sal'nikov, and M. V. Korovkin	955	59
Optical Absorption in a Heavily Doped Semiconductor with a Narrow Forbidden Band — V. A. Fedirko	960	65
Projective Invariance and the Fifth Coordinate — G. S. Asanov	966	71
Kinetics of the Growth of Thin Films with Respect to the Mechanism of Formation of Three-Dimensional Seeds on a Smooth Substrate — L. A. Borovinskii and A. N. Tsindergozen	971	76
Application of the Pseudopotential Method to the Calculation of the Phase Transition Temperature — D. L. Fuks, M. F. Zhorovkov, and V. E. Panin	975	80

Radiation Effects in Lepton Decays of Neutral Vector Mesons and $\mu - e$ Universality — B. K. Kerimov and V. P. Tsvetkov	979	84
Relativistic Computation of Intercombinational Transition Probabilities — A. D. Gurchumeliya, L. N. Labzovskii, and U. I. Safronova	984	90
π -Meson Production by Photons at He ³ in Current-Algebra Model — V. A. Serdyutskii and A. N. Tabachenko	989	96
On the Reactions of Photoproduction and Electromagnetic Generation of Λ and Σ Hyperons at Nucleons near the Threshold — I. V. Krive	995	102
Coherence Relaxation during the Diffusion of Resonance Radiation in Media with a Magnetic Field — V. P. Afanas'ev and B. A. Veklenko	1000	108
Analysis of the Behavior of a Multimode Gas Laser with a Resonator of Variable Optical Length. I. Theory — É. S. Vorobeichikov, V. N. Parygin, and L. N. Popov	1005	113
Deviations from the Born—Oppenheimer Approximation in Nonlinear X ₂ Y Molecules Yu. S. Makushkin and O. N. Ulenikov	1011	120
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Three-Dimensional Distribution of the Coefficient of Inverse Scatter in the Lower Troposphere — I. V. Samokhvalov and V. S. Shamanaev	1016	126
X-Ray Investigation of the Intermetallic Compound SmCo ₅ after the Action of Laser Beams — L. I. Mirkin and E. F. Smyslov	1018	127
Investigation of Light Phenomena in the Breakdown of Centimeter Vacuum Gaps — R. B. Baksht, G. M. Kassirov, G. V. Smirnov, and F. G. Sekisov	1021	130
Atomic Structures of Disordered Lithium—Gallium Ferrospherals — S. M. Zhilyakov, V. V. Ivolga, V. I. Mal'tsev, and E. P. Naiden	1024	132
Retuneable Organic Dye Solution Laser, Excited by a Nitrogen Laser — Yu. I. Bychkov, V. F. Losev, V. I. Revenko, V. F. Tarasenko, and V. B. Timofeev	1026	134
Dislocations in CdSb Doped by Te and In and Special Features of the Absorption of Polarized IR Radiation — T. S. Gertovich, S. I. Grineva, I. V. Mel'nichuk, I. M. Rarenko, and S. A. Khramtsova	1029	136
Study of End Configuration Effects in Electrical Explosion of Wires — V. M. Volkov and I. A. Shalkevich	1032	138
Thermal Processing and Light Sensitivity of Thin Layers of Glasses of the As—Se System — I. I. Turyanitsa, A. A. Kikineshi, D. G. Semak, and I. D. Turyanitsa	1034	139
Analysis of the Behavior of a Multimode Gas Laser with Resonator of Variable Optical Length. II. Experiment — É. S. Vorobeichikov, V. N. Parygin, and L. N. Popov	1037	141
Aging of Gallium Phosphide Luminescent Diodes — Yu. N. Verevkin and B. E. Samorukov	1039	143
Excitation of Elastic Waves by Neutrons in Fissile Materials — V. D. Volovik	1041	145
Measurement of the Ratio of Electron Mobility and Recombination Coefficients in an Arbitrary Gaseous Mixture — Yu. I. Bychkov, Yu. A. Kurbatov, and V. M. Orlovskii	1044	147
Lidar Transparency Diagnostics for an Optical Channel — G. M. Krekov, M. M. Krekova, and S. S. Khmelevtsov	1047	149
Hot Carrier Radiation in Cadmium Telluride — L. A. Kosyachenko and V. P. Makhnii ...	1049	151
Copper Diffusion in CdS Crystals Strongly Doped with Cd — M. V. Demidenko	1051	153
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Method of Calculating Statistical Weights in SU _n , U _n , c ₂ Groups — Kh. M. Beshtoev	1054	156
Reflection of a Light Wave from an Insulating Plate with a Conducting Face on One Side — M. G. Kessel' and L. G. Naryshkina	1054	156
Equations Relating the Radii of Maximum Radial Density for Electron Orbitals — G. A. Korablev	1054	156
A Metric for a Space with Spherical Symmetry — E. V. Borovko	1055	157
A Metric for a Space with Planar Symmetry — E. V. Borovko	1055	157

Temperature Dependence of the Lattice Constant and Thermal-Expansion Coefficients of KCl-KBr Solid Solutions - E. V. Pozdeeva, V. E. Avericheva, and M. N. Guzev...	1055	157
Vibrational-Energy Calculation for Diatomic Molecules - V. G. Blinkova and T. N. Popova..	1056	158
An Algorithm for Calculating Madelung Potentials - V. V. Gorlach and V. M. Lisitsyn.....	1056	158
Focused Collisions in an MgF ₂ Crystal - V. M. Lisitsyn and L. A. Lisitsyna.....	1056	158
Effects of an Electric Field on the Elastic Parameters of a Ferroelectric - V. B. Shkuryaeva, L. I. Zhrebtsova, and M. P. Zaitseva.....	1057	158
Effects of Sorption on the Luminescence of Metal Oxides - Z. F. Dmitrenko, V. V. Mikho, and V. F. Vorontsov.....	1057	159
A Possible Mode of Action for a Magnetic Contractor - G. V. Milyutin.....	1057	159
A Simple Device for Thickness Monitoring on Semitransparent Films for Use in Practicals - G. N. Podus and T. I. Maksimenko.....	1058	159
Growth and Properties of Epitaxial In _{1-x} Ga _x P Films Made by Liquid Epitaxy - L. A. Volkov, E. A. Glushkov, V. F. Kovalenko, and I. E. Maronchuk.....	1058	159
The Forward Emission from an Electron in the Field of a Planar Electromagnetic Wave - V. G. Bagrov, D. M. Gitman, V. A. Kuchin, and G. I. Flesher.....	1058	160
Expansion of the Susceptibility as a Power Series in the Ising Model for Arbitrary Dimensions - N. S. Isakov.....	1059	160
Quantitative Results on Radical-Recombination Luminescence of ZnS-Mn and ZnS-Mn, Cl Crystal Phosphors - V. V. Styrov, Yu. I. Tyurin, and A. V. Kharitonov.....	1059	160
Effects of Excitation Methods on the Optical Redistribution of Track Charges in ZnS Single Crystals - M. P. Andronov, F. F. Gavrilov, B. L. Dvinyaninov, and V. I. Nikishin.....	1059	160

Volume 18, Number 8

August, 1975

A Generalization of the Method of Enclosing Surfaces in Classical Radiation Theory - A. B. Kukanov and A. V. Konstantinovich.....	1061	7
Phase Transitions in Films Prepared from Alnico-Type Alloys - D. A. Laptei, S. B. Sinenko, A. V. Dolyuk, R. I. Ganzha, A. G. Il'in, and N. M. Salanskii.....	1066	12
Studies on ⁸⁵ Sr, ⁸⁶ Sr, and ¹⁰¹ Tc - R. B. Begzhanov, S. Kh. Salimov, and K. T. Teshabaev.....	1070	15
Electron Microscopy of Growth Surfaces on Epitaxial Films - L. M. Krasil'nikova, I. V. Ivonin, L. V. Masarnovskii, L. N. Sysoeva, and M. P. Yakubenya.....	1074	19
Conductivity Peculiarities in Epitaxial Layers of Cadmium Selenide - N. S. Bogomolov, Yu. K. Ezhovskii, and I. P. Kalinkin.....	1078	23
Electron Spectrum and Intrinsic Absorption of Heavily Doped n-GaAs - A. N. Levkov and G. G. Lomakin.....	1084	30
Excitation of Magnesium Ions in Slow Electron-Ion Collisions - V. A. Kel'man.....	1089	35
Importance of Polarization Processes near the Electrodes in Measurements of the Dielectric Constant of Conducting Media - V. S. Gangnus, A. N. Sus, and V. V. Berezin.....	1093	39
Completeness and Orthogonality on the Null Plane of One Class of Solutions of the Relativistic Wave Equations - D. M. Gitman, V. M. Shakhmatov, and Sh. M. Shvartsman.....	1097	43
Accumulation of F Centers in Alkali-Halide Crystals at Room Temperature - N. S. Kravchenko.....	1102	49
Method of the Effective Flexible Gyroscope in Polyatomic Molecules - Yu. S. Makushkin and O. N. Ulenikov.....	1106	54
Nonempirical Calculations of Molecular Force Constants in a Finite Movable Basis - A. Ya. Tsaune.....	1110	59

Influence of the Nature of the Filling Gas and the Radial Temperature Profile on the Density Profiles of the Plasma Components in Closed Systems - N. A. Bokova, N. F. Ivasenko, and E. N. Loginova	1114	63
Magnetic Structural Properties in Alnico Alloys under Equilibrium Conditions and under Magnetization - D. A. Laptei, V. E. Shcherbakov, and A. I. Drokin.	1118	68
New Exact Solutions of the Dirac Equation. IV - V. G. Bagrov, D. M. Gitman, A. G. Meshkov, V. I. Simanchuk, N. I. Fedosov, A. V. Shapovalov, and V. N. Shapovalov	1123	73
The Critical Approach Distance in Electron Channeling - A. A. Vorob'ev, V. V. Kaplin, and S. A. Vorob'ev.	1128	79
Choice of the Parameters of a Magnetic Undulator - M. M. Nikitin and A. F. Medvedev	1132	85
Fast Surface States Activated by Silver Ions on a Germanium-Neutral Electrolyte Interface - A. A. Shirokov, V. G. Bozhkov, and A. P. Vyatkin.	1137	91
Influence of Copper Ions and the Crystallographic Orientation on the Surface Properties of Germanium in Contact with an Electrolyte - A. A. Shirokov, V. G. Bozhkov, and A. P. Vyatkin	1142	97
Pair Creation in the Field of a Moving Charge - V. V. Skobelev	1146	101
The Quark Aspect of Partons - D. F. Kurdgelaidze	1150	105
Laser Ranging Equation for the Atmosphere Including Double Scattering - B. V. Kaul' and I. V. Samokhvalov	1153	109
Quantum Distribution Functions in the Phase Space of Cylindrical Coordinates - N. A. Denisova	1157	114
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Time-Overlap Simulation for Tracks of Heavy Charged Particles by Periodic Irradiation of Ionic Crystals and High-Power Nanosecond Electron-Beam Pulses - D. I. Vaisbund, V. P. Kuznetsov, V. A. Moskalev, and M. M. Shafir	1160	118
Energy Level Diagram of the CaO Molecule - G. A. Volynets and G. V. Kovalenok	1162	120
Melting-Point Trends for n-Alkyl Benzoates and Salicylates in Relation to Molecular Oscillation Frequency in the Crystal - L. M. Romanova	1164	122
Investigation of Transition Layers in Epitaxial Gallium Arsenide. Detection of Layers by Decoration - L. M. Krasil'nikova, I. V. Ivonin, and M. D. Vilisova	1166	123
Electrical and Photoelectrical Characteristics of the Heterostructure n-ZnS-n-GaAs - M. M. Atakova and P. E. Ramazanov	1169	125
Phase Diagrams of a Two-Frequency Echo with Time Separation - V. S. Grechishkin, V. S. Kirchanov, and E. M. Shishkin	1172	127
Effects of Electric Fields on the Thermoluminescence of Electroluminescent Films - V. V. Nuvar'eva and P. E. Ramazanov	1174	129
Application of a Time-Amplitude Converter to Measure Small Activities of Isotopes Having Metastable States - O. V. Il'ichev, V. M. Kolobashkin, Yu. A. Serbulov, and V. P. Ignatov	1177	132
Coherent States of Relativistic Particles - V. G. Bagrov, I. L. Bukhbinder, and D. M. Gitman.	1180	134
Demonstration of the Properties of the Central Fresnel Zone - Yu. P. Mikhailichenko	1182	135
Growth of $Al_xGa_{1-x}As$ Films of Controllable Thickness from a Thin Layer of Molten Solution - Kh. B. Zembatov and Yu. B. Bolkhovityanov	1183	136
Recording of Electromagnetic Pulses in Polymorphic Transformation of Quartz - A. A. Vorob'ev, V. N. Sal'nikov, and S. D. Zaver'tkin	1186	138
On the Theory of Level Splitting in Negatively Charged Electron Centers in Ionic Crystals - A. A. Berezin.	1189	141

An ESR Study of Defects in ZnS Single Crystals - A. S. Kushnir, B. G. Nosachev, S. A. Omel'chenko, I. V. Shtambur, and A. Ya. Yakunin.	1191	143
Physicochemical Properties of Solid Garnet Solutions Containing Bi and V - V. G. Bondar', V. M. Talanov, and A. N. Men'	1193	144
Physical Properties of Barium Titanate near the Curie Point - A. G. Khotchenkov	1196	146
Transition Effect in Electron-Photon Cascades - A. M. Kol'chuzhkin, É. B. Shoshin, and V. V. Ryzhov	1198	147
Motion of a Neutral Fermion Possessing Anomalous Magnetic and Electric Moments in an Electric Field - Yu. I. Klimenko	1200	149
Integral Emissivity of Fe-Ni Alloys at High Temperature - K. M. Shvarev, B. S. Gushchin, B. A. Baum, and P. V. Gel'd.	1202	152
Certain Properties of the CaO Molecule - G. A. Volynets and G. V. Kovalenok	1204	154
ABSTRACTS OF ARTICLES DEPOSED AT VINITI		
Experimental Proof of the Principle of Relativity - G. V. Nikolaev and B. V. Okulov.	1206	155
Feynman Paradox and Asymmetry of Laboratory and Moving Frames of Reference - G. V. Nikolaev	1206	155
Electrodynamic Analog of the Bernoulli Equation for Conduction Electrons in the Crystal Lattice of a Conductor - G. V. Nikolaev	1207	155
Effects of an Inhomogeneous Electric Field on the Escape of Compton Electrons from an Insulator - O. B. Evdokimov, G. E. Shchevelev, and A. P. Yalovets	1207	156
The Phonon Excitation Level in a Solid and Electronic Processes in Simple Chemical Reactions at Surfaces - V. F. Kharlamov and V. V. Styrov	1208	156
Criteria for Degeneracy and Ideal Behavior of a Relativistic Electron Gas in a Quantizing Magnetic Field - M. A. Ivanov, V. S. Sekerzhitskii, and G. A. Shul'man	1208	157
Calculations on Vibronic Transitions in CaO - G. A. Volynets and G. V. Kovalenok	1208	157
Effects of Traces of Calcium on the Optical Destruction of F Centers in NaCl Crystals - A. A. Zhaksylykova, A. N. Kravets, and M. K. Kasymov	1209	157
Some Forms of Discharge in Helium - A. A. Aliverdiev	1209	157
Maxwell-Wagner Polarization in Thin Heterogeneous Systems - Yu. D. Pankov	1209	158
Focussing by an Inhomogeneous Unretarded Planar Electromagnetic Wave - V. A. Bordovitsyn	1209	158
Transfer to a Synchronous Metric in the Spherically Symmetrical Case - A. G. Nekrasov and A. A. Mikhail'chuk	1210	158
Theory of the Modified Bush Method for Determining e/m - O. S. Petrov	1210	158
Temperature Dependence of Space-Charge-Limited Currents in Diode Structures for Wide-Band Photoconductors - N. V. Gavrilenko, A. F. Slonetskii, V. G. Boiko, A. D. Falenchuk, and D. M. Katerenyuk	1210	159
The Elastic Constants of KCl_xI_{1-x} Solid-Solution Single Crystals - V. N. Belomestnykh and A. A. Botaki	1211	159
Acoustic and Thermodynamic Parameters of Alkali Perchlorates - V. N. Belomestnykh	1211	160
Radiation-Stimulated Color-Center Conversion in MgF_2 Crystals - V. I. Korepanov and V. M. Lisitsyn	1212	160
Coherent States of Relativistic Particles in a Magnetic Field - V. G. Bagrov, I. L. Bukhbinder, and D. M. Gitman.	1212	160

Applicability of the Approximation of Equivalent Photons for Interference of Diagrams of Different Orders - A. V. Borisov and V. Ch. Zhukovskii	1213	7
Eigenfunctions of Linear Combinations of Creation and Annihilation Operators - V. G. Bagrov, D. M. Gitman, and V. A. Kuchin	1218	13
Atoms with Vacancies - Z. I. Kuplyauskis and A. V. Kuplyauskene	1224	19
Photoemission at High Quantum Energies. Energy Distribution of Escaping Electrons - M. Ya. Yushina	1227	23
Newtonian and Non-Newtonian Limits of Gravitational Fields of Kerr - Nut Type - A. A. Koppel'	1232	29
Generalized Equations of the Gravitoinertial Field. II - L. D. Raigorodskii	1237	34
Thermoelectronic Mechanism of Quenching the Photoluminescence of ZnS - Cl Phosphors by an Electric Field - A. S. Andrianov and D. P. Belan	1240	37
Effect of Alloying Conditions on the Structure of Ohmic Contacts to Gallium Arsenide - R. I. Barabash, M. V. Belous, V. N. Ivanov, Yu. A. Tsvirko, and S. P. Chenakin	1244	42
The Variation of Electrical Properties of Ni ₃ Mn Films as a Function of the Degree of Order - I. V. Chernykh, A. I. Shkurko, A. I. Ushakov, and V. V. Litvintsev	1248	46
Approximate Solution of the Liouville Equation for an Equilibrium System - R. M. Yul'met'ev'	1252	51
Analytic Properties of the T Matrix for Two Yukawa Potentials - S. S. Tokar'	1255	54
Micromorphology of Auto-Epitaxial Layers of Gallium Arsenide. I. Influence of Orientation and Alloying Admixture (Zn) - L. G. Lavrent'eva, I. V. Ivonin, L. M. Krasil'nikova, and L. P. Porokhovnichenko	1258	58
Preparation and Study of p-n Junction Structures Based on Solid Solutions Al _x Ga _{1-x} Sb - V. P. Germogenov, A. A. Vilisov, and A. P. Vyatkin	1265	63
Micromorphology of Auto-Epitaxial Layers of Gallium Arsenide. II. Initial Stages of Growth - L. G. Lavrent'eva, I. V. Ivonin, L. M. Krasil'nikova, and L. P. Porokhovnichenko	1270	69
Physical Properties of Group IV Transition-Metal Silicides - G. V. Samsonov, N. F. Podgrushko, M. I. Lesnaya, L. A. Dvorina, and N. F. Selivanova	1276	75
Distribution of Electrokinetic Characteristics in a Negative Glow Discharge Plasma - G. S. Evtushenko, A. G. Gridnev, and I. I. Murav'ev'	1281	80
Orthogonalization of Atomic Wave Functions and Construction of the Electron Density in a Crystal. I - A. I. Nazhalov, V. E. Egorushkin, V. F. Nyavro, V. A. Popov, and V. P. Fadin	1287	87
Orthogonalization of Atomic Wave Functions and Construction of the Electron Density in a Crystal. II - A. I. Nazhalov, V. E. Egorushkin, V. F. Nyavro, V. A. Popov, and V. P. Fadin	1292	93
The Concept of Effective Density and the Closed Integrofunctional Equation for a Radial Function of a Simple Liquid - V. B. Magalinskii	1295	96
Kinetics of Nickel and Nickel Stannide Solution in Liquid Tin - G. A. Pribytkov and V. I. Itin	1299	100
New Exact Solutions of the Dirac Equation. V - V. G. Bagrov, N. N. Byzov, D. M. Gitman, Yu. I. Klimenko, A. G. Meshkov, V. N. Shapovalov, and V. M. Shakhmatov	1304	106
Neutron Scattering on Vibrations of a Crystal Containing a Finite Concentration of Substitution Atoms - I. A. Murtazin	1310	112
Radiation of a Relativistic Rotator - A. V. Borisov and A. A. Matyukhin	1315	118
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Study of the Injection Laser in Practical Laboratory Work on Quantum Electronics - V. G. Gusev and B. N. Polzner	1319	123
Investigation of the Effective Magnetic Fields in Alloys with Unidirectional Anisotropy - N. Yu. Suyarov, A. Dzhurakulov, and R. Abbasova	1321	124

Selective Excitation of Argon Ions in the Cathode Region of a Glow Discharge - R. G. Karimov, I. I. Murav'ev, and V. S. Kurov	1323	126
Temperature and Concentration Dependence of the Anomalous Hall Field in Ferromagnetic Films - Yu. B. Glukhov, Yu. N. Didovich, and V. V. Litvintsev	1325	127
Motion of a Nonrelativistic Electron in the Field of a Plane Electromagnetic Wave - A. É. Arinshtein and G. I. Flesher	1327	129
Degree of Ionization of the Fe Atoms and Carrier Scattering in Mild Steel - I. N. Frantsevich, D. F. Kalinovich, I. I. Kovenskii, and M. D. Smolin	1329	131
Variation of the External Electric Field Intensity of Phosphate Glasses Charged by a Stream of Electrons - V. A. Starodubtsev and B. V. Fedorov	1331	132
The External Electric Field of a Phosphate Glass in an Electron Beam - E. K. Zavadvorskaya, V. A. Starodubtsev, B. V. Fedorov, and E. S. Kutukova	1333	134
Aging of Condensed Cu-Be Films - T. G. Beleicheva, K. K. Ziling, and I. S. Soldatenkov	1336	136
Current Limitation for a Fast Electron Beam due to Space Charge in an Insulator - O. B. Evdokimov, B. A. Kononov, and N. I. Yagushkin	1339	139
Physical Processes in a Silicon Nitride Film under Pulse Voltages - S. N. Morev	1342	141
Atoms of Fluorine Type in $2p^4 3p$ Configurations - Z. I. Kupliauskis and A. V. Kuplauskene	1344	143
Crystallochemical and Magnetic Features of Spinel-Structure $Cu_{1-c}Zn_cFe_2(1-c)Cr_2O_4$ Solid Solutions - V. K. Pokrovskii, L. A. Pokrovskaya, M. P. Bogdanovich, and A. N. Men'	1346	145
Frequency Dependence of the Electroluminescence Intensity for CdF_2 -Rare-Earth Single Crystals - V. V. Azarov and G. V. Martynov	1348	147
Axisymmetric Phase Zone Plate for Acoustic Waves - V. L. Larin	1351	149
Statistical Characteristics of the Attenuation Coefficient for a Patchy-Cloud Model - G. N. Glazov and G. A. Titov	1353	151
The Madelung Constant and the Degree of Tetragonality in a Double Hexagonal Close-Packed Lattice and a $C14$ Structure ($MgZn_2$ Type) - D. L. Fuks, M. F. Zhorovkov, and V. E. Panin	1357	155
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Absorption Spectra of Solutions of Organic Compounds - M. I. Bashmakova and O. Ya. Kotlyarovskaya	1359	157
Path Integrals for Relativistic Particles - P. B. Fedosenko	1359	157
Entropy Production and Local Equilibrium in Relativistic Thermodynamics - E. G. Shreder and Yu. I. Paskal'	1360	157
Spectral Reflectivities of Some Natural Objects and Materials at $2.2-3.7 \mu$ - B. D. Borisov	1360	158
Electromagnetic Green's Tensors for a Half-Space Bounded by an Inhomogeneous Anisotropic Plane - V. G. Myshkin	1360	158
Luminescence in Chemically Deposited (Zn, Cd)S Films - G. V. B. Birkle, V. P. Panov, F. F. Gavrilov, G. A. Kitaev, N. A. Kodomskaya, and M. V. Degtyarev	1361	158
The Thermal Destruction Energy for CdS:Cu Crystals - M. V. Demidenko	1361	159
A Group-Theoretic Study of the Phonon Spectra of Single-Alkali and Multialkali Antimonides - V. A. Chaldyshev and V. K. Mudruk	1361	159
Effects of Pressure on the UHF Parameters of $BaTiO_3$ Ceramic - A. V. Turik, E. N. Sidorenko, V. F. Zhestkov, V. A. Tais'eva, and V. D. Komarov	1362	159
Photostimulated Adsorption of Oxygen on CdTe - A. D. Falenchuk and Z. M. Pozhidaeva	1362	159
The Oscillation Contribution to Dislocation Damping in a Ferromagnetic - A. A. Rodionov	1362	160
Polarizability of a Molecular Beam Interacting with Silicon - N. A. Meshcheryakov	1363	160
Effects of Potassium on the Work Function of BaO-CaO-SrO - V. N. Zlupko, I. T. Romanchuk, and L. S. Savchin	1363	160
Graphical Representation of Statistical Sums for Lattice Models - S. N. Isakov	1363	160

Kinetic Equations of a System of Coulomb Particles in a Weakly Relativistic Approximation - V. P. Milant'ev and L. P. Pasechnik	1365	7
On the Influence of Radiation Friction on Charge Motion in a Plane Monochromatic Wave Field - A. M. Voloshchenko and Yu. G. Pavlenko	1369	13
Magnetoelastic Properties of RCO_2 Films - N. I. Luzgin and V. A. Domyshev	1374	19
A Radially Rigid System of Reference and the Dynamic Effects of the Curvature of Space - V. I. Babetskii	1378	24
The Bogolyubov Variational Principle in the Theory of an Anharmonic Crystal - I. P. Bazarov and É. V. Gevorkyan	1382	28
Double Hypernuclei and the Λ - Λ Interaction - N. N. Kolesnikov, S. M. Chernov, and V. I. Tarasov	1385	33
Forbidden Transitions in Anisotropic Electron-Nucleus Interactions - B. F. Alekseev and A. I. Mamykin	1390	38
Correlated Migrations in a One-Dimensional Lattice - A. S. Dolgov	1394	43
Electron Structure and Spectrum of Dimethyl Sulfide - V. I. Khaustova and V. I. Danilova	1397	47
Synchrotron Radiation from Relativistic Electrons in Intense Magnetic Fields - A. A. Sokolov, A. V. Borisov, and V. Ch. Zhukovskii	1400	51
Buildup of Color Centers in Electron-Irradiated Phosphate Glass - N. N. Zausaeva, S. E. Nizkii, and V. A. Starodubtsev	1405	57
Bremsstrahlung of a Neutral Fermi Particle in the Field of a Plane Electromagnetic Wave - Yu. I. Klimenko, V. V. Kulish, and A. I. Khudomyasov	1410	63
Recombination Processes in a Negative Glow Discharge in Helium and a Helium-Neon Mixture - V. S. Kurov, R. G. Karimov, and I. I. Murav'ev	1414	68
Calculation of the Potential Pattern of a Screw Dislocation and Its Distortion near Monovacancies in an Ordered Solid AuCu_3 Solution - Yu. N. Lebedev, É. V. Kozlov, and M. D. Starostenkov	1419	74
Three-Component Optical Doppler Anemometer - V. M. Kulybin	1425	82
Radiation from a Charged Current-Carrying Filament in a Transparent Uniaxial Crystal - A. B. Kukanov	1429	86
On Statistical Fluctuations in Detector Readings in a Radiation Field - A. M. Kol'chuzhkin and V. V. Uchaikin	1433	90
Application of a Complex Band Structure to Compute the Surface States by the Green's Function Method - V. A. Chaldyshev, V. N. Chernyshov, and V. A. Goryunov	1438	97
Effects of Atomic Size on Antiphase Boundary Energy in Solid Solutions - A. E. Ginzburg, É. V. Kozlov, and R. P. Kharlova	1443	103
Physical Properties and Electron Spectrum of Solid Solutions $(\text{Co}_{1-x}\text{Ni}_x)_5\text{Ge}_3$ - V. L. Zagryazhskii, T. P. Agalakova, and P. V. Gel'd	1447	108
Synthesis, Atomic Structure, and Magnetic Properties of Solid Solutions in the System $\text{Li}_{0.5}\text{Fe}_{2.5}\text{O}_4$ - $\text{Cu}_{0.5}\text{Fe}_{2.5}\text{O}_4$ - M. A. Zinovik, E. P. Naiden, and S. M. Zhilyakov	1452	114
Collective Crystallization of Microscopic Particles in Disperse Solid Systems - V. I. Psarev	1455	118
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Theory of the Spinodal Decomposition of a Solid Solution in the Approximation of a Screened Coulomb Interaction between Ions - V. M. Agishev and K. M. Yamaleev	1460	124
Influence of End Effects on the Development of a Shunting Discharge during Pulsed Heating of Conductors in Vacuum - V. M. Volkov, S. A. Gaev, and I. A. Shaikevich	1463	126
Method of Additional Treatment of a Photographic Image for Subsequent Application of an Optimal Filter - L. M. Anan'ev and A. S. Moskaleva	1465	128

Detection of Electroacoustic Resonance by Means of a Change in Mutual Conductivity of Waveguide Apertures - M. S. Bobrovnikov, S. A. Komarov, V. I. Timoshenko, and V. V. Fisanov	1467	130
Radiation Generation of Cation Vacancies in NaBr At 130°K - Yu. M. Annenkov, T. S. Frangul'yan, and Yu. I. Galanov	1469	131
Transmission of Fermions through a Potential Barrier - I. K. Karpenko	1470	133
Dielectric Properties of Supermultilayer Films Based on Silicon and Germanium Oxides - Yu. D. Pankov, V. A. Kamin, Yu. V. Pestov, and S. S. Andreev	1473	135
Proof of Onsager's Linear Law Based on Methods of Physical Kinetics - A. F. Krylov	1475	137
Anisotropic Acoustomagnetolectric Effects in Classical Magnetic Fields with Sound of Intermediate Frequency - A. A. Lipnik	1476	138
Induced Radiation of a Scalar Particle in the Field of Two Opposed Electromagnetic Fields - Yu. I. Klimenko and V. V. Kulish	1479	140
Polarization Operator of a Photon in an Ultraintense Magnetic Field - V. V. Skobelev	1481	142
Thermally Induced emf in Silicon Carbide - O. K. Gaevskii, S. A. Podlasov, and V. G. Sidiyakin	1483	144
Radiative Conductivity of Alkali-Halide Crystals - Yu. M. Annenkov and V. F. Pichugin	1486	147
Simulating the Neutral Flux Distribution in the IRT-M Reactor - F. P. Koshelev	1489	149
Paragas Thermodynamics - V. V. Ul'yanov and I. B. Shapiro	1492	152
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Spinors in Reference-Element Space - V. P. Sevryuk	1494	154
Covariant and Dynamical Quark-Field Theories - V. P. Sevryuk	1494	154
Effects of Heat Treatment on the Magnetic Parameters of Alumel and Chromel Thermocouple Materials - R. A. Vafin and F. G. Zabirov	1494	154
Domain-Boundary Mobility in a Two-Layer Film - P. D. Kim, V. I. Zlobin, and L. A. Bogatyreva	1495	154
Quantitative Data on Radical-Recombination Luminescence for ZnS-Cu, Cl - V. V. Styrov, Yu. I. Tyurin, and A. V. Kharitonov	1495	155
A Covariant Spinor (Quark) Field Theory - V. P. Sevryuk	1495	155
Electron-Trap Parameter Determination for Anodic Oxide Films - L. A. Zudova, A. I. Zudov, and V. A. Sterkhov	1496	155
Bremsstrahlung from Electron Collisions - Yu. B. Likhushin and A. I. Smirnov	1496	155
Effects of Hydrogen Bonds on the Dynamic and Electrooptic Parameters of NH ₂ Groups - V. A. Pimenov, B. B. Fainitskii, and V. E. Volkov	1496	156
The Green Bands of Ca ₂ - G. A. Volynets and G. V. Kovalenok	1496	156
Concentration Dependence of Physical Properties for Quenched Alloy Steels - A. I. Medved', A. Ya. Mikhail'chuk, and V. V. Tsybul'ya	1497	156
A Variational Principle in Relativistic Thermodynamics - É. G. Shreder and Yu. I. Paskal'	1497	156
Electron Emission into Vacuum from Thin Rocksalt Single-Crystal Films - S. N. Morev, N. S. Nesmelov, and A. P. Natarov	1497	157
Zero-Plane Formalism and Radiation from an Electron in an External Electromagnetic Field - V. G. Bagrov, D. M. Gitman, and Sh. M. Shvartsman	1498	157
Laser Observation in Polarized Light - V. V. Sperantov	1498	157
Ionic Conductivities of Cesium Halides after High-Dose Gamma Irradiation - I. P. Antoniv, V. T. Zil'bert, I. V. Karlovskaya, and N. A. Tsal'	1498	157
The A ¹ Σ _u ⁺ -X ¹ Σ _g ⁺ Potential-Energy Curves for Ca ₂ - G. A. Volynets and G. V. Kovalenok	1499	158
Electrical Parameters of Silver-Doped CdTe Single Crystals - S. Sultanov, Sh. Mavlonov, and S. Karimov	1499	158

The Anomalous Magnetic Moment of the Electron in the Description of Cold Dense Matter in Ultrastrong Magnetic Fields - V. S. Sekerzhitskii, and G. A. Shul'man	1499	158
A Variational Principle in Thermodynamics and Entropy Production with a Mobile Boundary - É. G. Shreder and Yu. I. Paskal'	1500	158
Nuclear Shape and Size in the Two-Center Oscillator Approximation - D. F. Morozov	1500	159
Raman Spectra and the Longitudinal and Transverse Bending Modes of n-Alkyl Esters - L. M. Romanova, A. I. Prorvin, A. V. Sechkarev, and N. G. Torgunakov	1500	159
Radical Recombination Luminescence in Crystal Phosphors: The Ionization-Type Excitation Mechanism and the Emission Characteristics of Narrow-Band Materials - Yu. I. Tyurin and V. V. Styrov	1501	159
Photofield Transitions in Semiconductors Involving Deep Levels - Ya. S. Matronitskii, V. D. Prodan, and Ya. A. Rozneritsa	1501	159
Diffusion of Copper in Zinc Sulfide Single Crystals - A. M. Nemchenko	1501	160
Force-Constant Calculation for Polyatomic Molecules without Symmetry-Dependent Reduction of the Energy Matrix - N. F. Kovalenko and R. N. Ruban	1502	160
Two-Photon Ionization of Deep Traps in a Semiconductor - V. D. Prodan and Ya. A. Rozneritsa	1502	160
The Relation of Space Charge to Nonlinear Effects in Niobium Oxide Films - G. I. Bogdan, T. V. Torchinskaya, and L. V. Shcherbina	1502	160

Volume 18, Number 11 November, 1975

Theory of Radiation from a Uniformly Moving Linear Oscillator - A. B. Kukanov and Él'kheder Suleiman	1503	7
Attenuation of Acoustic Modes near the Phase-Transition Point in a Gadolinium Molybdate Type Ferroelectric - N. V. Shchedrina	1506	11
Mean Intensities of the Solar Radiation Transmitted and Reflected by Clouds in the Approximation of Single Scattering - G. N. Glazov and G. A. Titov	1511	17
A Simple Criterion of Whether Gravitational Fields with an Ideal Fluid Are Conformally Euclidean - V. I. Obozov	1514	20
Influence of the Accommodation Coefficient on the Water Drop Evaporation Process in a Radiation Field - Yu. N. Grachev and G. M. Strelkov	1520	27
Characteristics of Atomic Structure and Electron Scattering in Copper-Germanium Melts - V. Ya. Prokhorenko and B. M. Gapchin	1523	33
Behavior of Stripe-Domain Structure in Normal Magnetic Fields - A. M. Morozov and D. I. Sementsov	1530	39
Exact Green's Function of the Equations of Quantum Mechanics in an Electromagnetic Field. I - V. V. Belov	1535	45
Exact Function of the Equations of Quantum Mechanics in an Electromagnetic Field. II - V. V. Belov	1540	50
The Thirring-Model Current Group and Its Representations - E. V. Damaskinskii and P. P. Kulish	1545	57
Group-Theoretical Analysis of Phonon Spectrum in Th ₃ P ₄ Crystals - G. F. Karavaev and A. V. Khrapov	1549	62
Charge Capture by Surface States in Heat-Oxidized Germanium - P. K. Kashkarov, S. N. Kozlov, and M. V. Tosheva	1554	66
Velocity of Sound in Curved Space-Time - V. V. Petrov	1557	73
The Theory of Nuclear Spin Diffusion Due to Paramagnetic Impurities in a Diamagnetic Crystal - R. Kh. Sabirov	1560	76
High-Current Accelerator Observation of $\gamma + \gamma \rightarrow e^{\pm}$ - V. M. Bystritskii, B. V. Okulov, Yu. P. Usov, and V. N. Shustova	1564	81

Solving Bogolyubov "Chains" for an Ionic Crystal - I. I. Ol'khovskii and V. L. Ékelekyan	1568	86
Thermal Decomposition of Bogolyubov "Chains" in the Quasiharmonic Approximation for the Case of an Ionic Crystal - I. I. Ol'khovskii and V. L. Ékelekyan	1573	92
Light-Response Spectrum of a p-n Junction of Rediffused InSb in a Magnetic Field - A. G. Grammakov, Kim Gvan De, O. V. Kosogov, and M. A. Maramzina	1578	97
Application of the Dyadic Method to the Description of Gravitational Waves - Yu. S. Valdimirov and V. N. Efremov	1581	101
Electron Correlation in Three Electron Ions - V. M. Zelichenko, E. I. Cheglov, and V. P. Kiselev	1588	108
Theory of Gas Breakdown in an Inhomogeneous Field - É. D. Lozanskii	1593	114
Effect of Temperature on the Dislocation Structure of the Ordered Alloy Ni ₃ (Fe,Cr) - N. A. Koneva, V. F. Esipenko, É. V. Kozlov, A. S. Tailashev, B. V. Dem'yanov, and L. E. Popov	1596	118
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Diffusion of Charge Carriers from the Negative Glow of a Glow Discharge - N. V. Volkov	1602	124
Calculation of the Potentials of Ion-Ion Interaction and the Physical Properties of Liquid Aluminum and Germanium - I. A. Pavars, E. S. Levin, and P. V. Gel'd	1604	126
Maximum Energy Density in a Proton Track - D. I. Vaisburd and N. N. Sirota	1606	128
On the Rotation of Material Particles Moving in a Gravitational Field - V. I. Obozov	1609	131
Radiation of an Electron with Anomalous Moments in the Field of a Plane Wave - Yu. I. Klimenko, V. V. Kulish, and A. I. Khudomyasov	1611	132
Nonstationary Radial-Velocity Distribution Function for Charged Particles in a Uniform Magnetic Field - B. V. Kholomai	1613	135
Equations of State of Strongly Anharmonic Crystals - V. I. Zubov, Domingo Vera Mendoza, and Victor Antonio De Leon	1615	137
Nonindependent Pulsed Atmospheric Pressure Discharge Sustained by a High-Energy Electron Beam Lasting 100 μ sec - Yu. I. Vychkov, S. A. Genkin, Yu. D. Korolev, G. A. Mesyats, V. G. Rabotkin, and A. G. Filonov	1618	139
Negative Photoconductivity in CdCr ₂ Se ₄ - N. A. Drokin, N. M. Salanskii, A. N. Borisov, and V. K. Chernov	1620	140
Computation of the Electric Field at Multipoint Cathodes - S. Ya. Belomytsev, S. F. Bugaev, V. P. Il'in, E. A. Litvinov, and G. A. Mesyats	1622	142
Spatial Characteristics of a Photoionization Plasma - I. V. Krasnov and N. Ya. Shaparev	1624	144
Superradiation at Doubled Frequency - O. N. Gadomskii, V. R. Nagibarov, and N. K. Solovarov	1626	145
Peculiarities of Transformations in the Hexagonal Manganese Silicide Mn ₅ Si ₃ - P. V. Gel'd, S. I. Kuznetsov, R. P. Krentsis, A. V. Mikhel'son, N. P. Sudakova, and M. E. Sheinker	1628	147
Nuclear Specific Heat of Ordered Pt ₃ Co Alloy - P. I. Stetsenko and Yu. I. Avksent'ev	1629	148
Photon Scattering in a Nuclear Field with the Formation of an Electron-Positron Pair - A. I. Smirnov	1631	150
Electrical Conductivity and the Hall Effect of Indium in the Solid and Liquid States - O. K. Kuvandykov, R. T. Tagaev, S. A. Sadykov, and I. Subkhankulov	1633	152
Effect of Slow Preliminary Loading on the Strain-Hardening of Copper and Some Copper Alloys - I. A. Gindin, E. M. Myalova, O. T. Rozumnyi, and I. I. Soloshenko	1635	153

Energy Spectra of Cs^+ Ions Scattered by a Molybdenum Single Crystal - V. I. Veksler and V. V. Evstifeev	1637	155
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Temperature Dependence of F and M Center Accumulation in MgF_2 Crystals - V. M. Lisitsyn and V. I. Korepanov	1639	157
The Scope for Creating a Gravitational Field. I - E. V. Borovko	1639	157
The Scope for Creating a Gravitational Field. II - E. V. Borovko	1639	157
Photosensitivity of Au-n-Ge Surface-Barrier Photodiodes - Yu. A. Dobrozhanskii and V. A. Presnov	1640	158
The Complex Band Structure of GaAs - V. A. Chaldyshev and V. N. Chernshov	1640	158
Effects of Ionic Charge and Size on Defect Formation and Migration in Crystals - V. V. Gorlach and V. M. Lisitsyn	1640	158
Intramolecular Vibration Redistribution - V. V. Svishchenko and G. V. Maier	1641	158
The Symmetrized Green's-Function Method for Crystals - I. N. Anokhina, V. E. Egorushkin, A. I. Nazhalov, V. F. Nyavro, V. A. Popov, N. I. Fedyainova, and V. P. Fadin	1641	159
Reduction of Real Quadratic Forms to Canonical Style - V. N. Shapovalov	1641	159
The Hall Effect and the Asymmetry of Laboratory and Moving Frames of Reference - G. V. Nikolaev	1642	159
Absorption of Radiation by a Voigt Line - I. I. Klykov	1642	160
The Complex Band Structures of Ge and Si - V. A. Chaldyshev and V. N. Chernyshov	1642	160
The Quantum Wigner Distribution. I - V. N. Gorshenkov	1643	160
The Production of Film Structure in the Vacuum Evaporation of Copper-Base Alloys - V. I. Popov	1643	160

Volume 18, Number 12 December, 1975

Compensation and Nonlinear Theory - G. A. Sardanashvili	1645	7
Symmetry of Equations of Motion for a Free Particle in Riemann Space - V. N. Shapovalov	1650	14
Derivation of the "Fundamental" Equation of Radiation Kinetics - A. E. Bulyshev, N. G. Preobrazhenskii, and A. E. Suvorov	1655	19
An Approximate Lorentz-Invariant Hamilton-Jacobi Equation - R. P. Gaida	1658	23
Calculation of the Components of the Photoelastic Effect in Alkali-Halide Crystals - A. V. Pakhnev, M. P. Shaskol'skaya, and S. S. Gorbach	1662	28
Temperature Characteristics of the Mechanical Properties and of the Dislocation Structure of Molybdenum-Rhenium Alloys - A. N. Tyumentsev, A. D. Levitskii, N. I. Freze, and A. D. Korotaev	1668	34
Calculation of Short-Range Order in the Method of Cluster Components - K. Yu. Shunyaev, M. P. Bogdanovich, V. M. Bich, and A. N. Men'	1671	37
A Study of n, σ Complexes of Various Compositions by the CNDO/S KW Method. I. - L. V. Orlovskaya and N. P. Kargopol'tseva	1678	46
A Study of the Properties of n, σ Complexes of Various Compositions by the CNDO/S KW Method. II - L. V. Orlovskaya and N. P. Kargopol'tseva	1683	52
Near-Cathode Potential Drop in a Vacuum Diode with Explosive Emission of Electrons - D. I. Proskurovskii and V. F. Puchkarev	1687	57
Calculation of Solid Solution-Graphite Interphase Energy in Ni-C, Co-C, and Fe-C Alloys - V. N. L'nyanoi	1692	63
Calculation of the Relative Intensities of Vibratory Structure Lines in the Absorption Spectrum of Benzene, Taking into Account All Peripheral Electrons - Yu. V. Kamenskii, M. V. Priyutov, I. F. Kovalev, and M. G. Voronkov	1696	68
Study of the Natural Structure of the Formed System $\text{Al-Si}_3\text{N}_4\text{-Al}$ - V. A. Burdovitsin, V. L. Galanskii, V. D. Zamozhskii, B. M. Kuchumov, and Yu. B. Yankelevich	1698	71

Differential Equations of Spin Dynamics and Asymptotic Expansion of Quantum Expectation Values near the Classical Limit. I - V. V. Zverev	1701	73
Differential Equations of Spin Dynamics and Asymptotic Expansion of Quantum Expectation Values near the Classical Limit. II - V. V. Zverev	1706	79
Scattering of Neutrinos (Antineutrinos) on an Electron with Emission of a Photon in the Renormalizable Theory of the Weak and Electromagnetic Interaction - E. D. Zhizhin, R. V. Konoplich, and Yu. P. Nikitin	1709	82
Influence of Manganese and Gallium Ions on the Magnetic Structure of Lithium Ferrite - Sh. Sh. Bashkirov, R. A. Iskhakov, A. B. Liberman, L. K. Manenkova, and V. I. Sinyavskii	1715	89
Multicenter Approximation in the CV Method - N. S. Golosov and V. N. Udodov	1718	93
Theory of Generalized Collision Integral. III - A. L. Mironov, V. V. Istomin, and S. P. Dovgopol.	1722	97
The Thermo-emf of Alloys with Order - S. I. Masharov and N. M. Rybalko	1725	101
Effects of Surface-Active Media on the Adhesion Energy in Failure of an Insulator - A. A. Vorob'ev and V. D. Evseev	1729	105
Trapping of Charged Particles by Transverse Electromagnetic Waves - V. Ya. Davydovskii, V. G. Sapogin, and A. S. Ukolov.	1732	110
Recrystallization of Dispersion-Hardened Nickel Alloys with a Polygonalized Substructure - Yu. R. Kolobov, L. S. Bushnev, and B. N. Babich.	1738	116
BRIEF COMMUNICATIONS AND LETTERS TO EDITOR		
Role of the Scaling Factor in Radiation Variation of the Stress-Strain Properties of NaCl Whisker Crystals - N. N. Demidova and S. U. Gol'denberg	1746	123
Spatial Form of Localized Single-Electron States in an Alkali-Halide Crystal with Bivalent Activator - V. N. Salomatov.	1748	124
Nonparametric Calculation of Moduli of Elasticity of Ionic Crystals - V. A. Zhdanov and V. V. Polyakov.	1750	127
Effect of Uniaxial Compression on Dielectric Permeability of Vanadium Pentoxide - I. M. Chernenko, A. I. Ivon, and A. S. Tonkoshkur.	1752	128
Thermodynamics of Phase Transition in Ferroelastic BiVO_4 - V. V. Gene, E. V. Sinyakov, and E. F. Dudnik	1754	131
Effect of Magnetic Field on Phase Transformations of the First Kind - G. V. Samsonov, B. M. Rud', I. M. Vinit'skii, and V. D. Levandovskii	1755	132
Luminescence of LiCl-Cu and LiBr-Cu Single Crystals at 4.2°K - N. S. Pidzyrailo, M. V. Tokarivskii, and I. P. Pashuk	1757	133
Total Conduction of Semiconductor Diode Working on Alternating Current in the Biinjection Mode, Taking Account of Bimolecular Recombination - B. L. Timan, V. M. Fesenko, and G. M. Gulevich	1760	136
Consistency of Equation for the Density of an Inhomogeneous System in Terms of a Binary Function of a Homogeneous Liquid - V. B. Magalinskii.	1762	139
Luminescence of Activated Carbon and Its Quenching by Oxygen - V. A. Savel'ev, I. A. Zakharov, and V. B. Aleskovskii	1764	140
Demonstration of the Barkhausen Effect in Ferroelectrics and in Ferromagnetics - Yu. N. Kharitonov and V. M. Rudyak	1766	142
Statistical Fermi Theory of Multiple Creation of Particles - Kh. M. Beshtoev	1767	142
Anisotropy of Spin Hamiltonian Parameters of Paramagnetic Centers in $2s_{1/2}$ State - Ya. G. Klyava	1769	145
Physical Properties of a Homogeneous State at the Stability Boundary - Kh. I. Mogel' and A. V. Chalyi	1771	146
Excitation of Laser Radiation in Table Salt - G. A. Vorob'ev, S. G. Ekhanin, N. I. Lebedeva, S. N. Morev, and N. S. Nesmelov.	1774	149
Monte Carlo Calculation of the Interaction Characteristics of Low-Energy Electrons with a Gas - V. V. Ryzhov and A. G. Yastremskii	1775	150
Positron States in Defective Alkali-Halide Crystals - K. P. Aref'ev, S. A. Vorob'ev and F. I. Étin.	1777	152

ABSTRACTS OF PAPERS DEPOSITED AT VINITI

Tunneling-Diffusion Effects - G. I. Kuz'menko	1779	154
Domain Boundary Resonance and Magnetization Processes in Ferrite Single Crystals.		
Part 1. Disk Magnetization - G. M. Deikova and V. N. Rubanov.....	1779	154
Domain-Boundary Resonance and Magnetization Processes in Ferrite Single Crystals.		
Part 2. Sphere Magnetization - G. M. Deikova and V. N. Rubanov.....	1780	154
Magnetic Susceptibilities of Bi-Ga Alloys - B. P. Pashaev, V. V. Seleznev,		
A. S. Biyachuev, and Sh. A. Sultanov	1780	155
Whiteman Two-Point and Commutator Functions in the Theory of Rapidly Increasing		
Fields - Sh. M. Pevzner	1780	155
Effects of the Electronic Surface State on the Ferroelectric Parameters of SbSI		
- V. V. Betsa, Yu. V. Popik, and I. D. Turyanitsa	1781	155
Effects of Electrode Temperature on Low-Voltage Electrical Breakdown		
- K. K. Namitkov and E. N. Pryanchikov.....	1781	156
Effects of Actinic Radiation on the Optical Parameters of Lead Iodide		
- E. P. Krasnozhenov and V. A. Tsendrovskii.....	1782	156
Apparatus and Methods in Measuring Atmospheric Transmission Over Long Paths		
- A. A. Pershin and Yu. A. Pkhalagov	1782	156
Magnetization Jumps in Alnico Alloys - D. A. Laptei and V. N. Perminov	1783	157
Electrical-Strength Measurement for Alkali-Halide Double Layers		
- T. K. Kocherbaev and K. M. Musaev	1783	157
Effects of Heat Treatment on the Electrical Strength of a Eutectic Polycrystalline		
Mixture - D. S. Kostenko and T. K. Kocherbaev.....	1784	157
INDEX		
Author Index, Volume 18, Numbers 1-12, 1975	1787	
Tables of Contents, Volume 18, Numbers 1-12, 1975	1795	



